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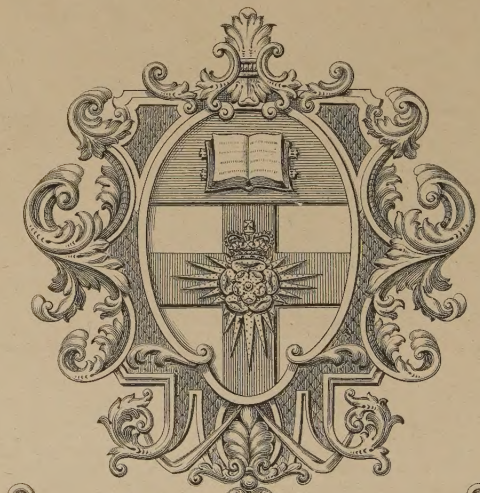

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REPORTS

FROM

COMMISSIONERS:

TWENTY-TWO VOLUMES.

—(11.)—

MILITARY EDUCATION; QUEEN'S COLLEGES; QUEEN'S UNIVERSITY.

Session

10 *December* 1868 —— 11 *August* 1869.

VOL XXII.

REPORTS

FROM

COMMISSIONERS:

TWENTY-TWO VOLUMES.

—(III.)—

MILITARY EDUCATION: QUEEN'S COLLEGES:

QUEEN'S UNIVERSITY

Session

10 December 1860 — 11 August 1859.

VOL. XXII.

REPORTS FROM COMMISSIONERS:

1888-9.

THE STANDING ORDERS—SAVINGS BANKS.

MILITARY AUDITING.

NOTE.—THE Reports of the Departments of the Treasury, corresponding with the "Appendix to the Report of the Public Accounts Committee," will be found in the Blue Book to be laid before the House of Commons.

MILITARY EDUCATION: Royal Commission appointed to Inquire into the

REPORTS FROM COMMISSIONERS:

1868-9.

TWENTY-TWO VOLUMES:—CONTENTS OF THE

ELEVENTH VOLUME.

N.B.—*THE* Figures *at the* beginning of the line, *correspond with the* N° *at the foot of each* Report; *and the* Figures *at the* end of the line, *refer to the* MS. Paging *of the Volumes arranged for The House of Commons.*

MILITARY EDUCATION:

[4221.] First Report of a Royal Commission appointed to inquire into the present state of Military Education, and into the Training of Candidates for Commissions in the Army - - - - p. 1

FOLIO

[4153.] Third Report of the Council of Military Education - 241
Libraries, and Recreation Rooms - - - - - 61

QUEEN'S COLLEGE (BELFAST):

[4112.] Report of the President of Queen's College, Belfast, for the Year ending 10th June 1868 - - - - - - - 317

QUEEN'S COLLEGE (CORK):

[4111.] Report of the President of Queen's College, Cork, for the Year ending 31st March 1868 - - - - - - 421

QUEEN'S COLLEGE (GALWAY):

[4179.] Report of the President of Queen's College, Galway, for the Years ending 31st March 1868 and 1869 - - - - - 517

QUEEN'S UNIVERSITY (IRELAND):

[4191.] Report on the Condition and Progress of the Queen's University in Ireland, for the Year 1868-69 - - - - - 617

FIFTH REPORT

BY THE

COUNCIL OF MILITARY EDUCATION

ON

ARMY SCHOOLS, LIBRARIES, AND RECREATION ROOMS.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1868.

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CONTENTS.

REPORT.

		Page
I.	Preamble	iii
II.	Schoolmasters	iii
III.	Schoolmistresses	v
IV.	Inspection of Schools	vii
V.	State of Education in the Army	ix
VI.	„ „ School	x
VII.	Attendance at School	xiii
VIII.	Certificates of Education	xv
IX.	Special Classes	xviii
X.	Examinations	xx
XI.	Children's Schools	xxi
XII.	Religious Instruction	xxiii
XIII.	Royal Military Asylum	xxiii
XIV.	Royal Hibernian School	xxvii
XV.	Lectures	xxx
XVI.	Garrison Libraries	xxxii
XVII.	Recreation Rooms	xxxiii

APPENDIX.

I.	List of Schoolmasters	1
	Ditto appointed by the Government of India	4
II.	Reports of Assistant and Local Inspectors	4
III.	Table of Progress in Adult Schools	83
IV.	Special Classes and Certificates of Education in possession of Soldiers	86
V.	Table of Progress in grown Children's Schools	97
VI.	Royal Military Asylum.—Normal School Examinations	100
	„ „ Report on Model School	104
VII.	Lectures to the Troops	111
VIII.	Garrison Libraries	130
IX.	Regimental Recreation Rooms	137

FIFTH REPORT

BY THE

COUNCIL OF MILITARY EDUCATION

ON

ARMY SCHOOLS, LIBRARIES, AND RECREATION ROOMS.

I.

I. Report.

The Council of Military Education have the honour to submit to His Royal Highness the Field Marshal Commanding-in-Chief, and to the Right Honourable the Secretary of State for War, their Report on Army Schools, Libraries, and Recreation Rooms, for the two years ending 31st March 1867 and 1868.

II.

Schoolmasters.

II. Schoolmasters.

On the 31st March 1868 the establishment of Schoolmasters stood thus, viz. :—

Under the New Regulations as to Pay, Pension, and Promotion.

Superintending Schoolmasters - - -	10
Army Schoolmasters - - - -	203

Under the Old Regulations.

1st Class Schoolmasters - - -	14
2nd „ „ - - -	30
3rd „ „ - - -	2
Total - -	259

II. Schoolmasters.

As on the 31st March 1866 the establishment consisted of 235, there has been an increase of 24 schoolmasters.

There were also on the 31st March 1868 the following persons, who may be considered as being under training for the office of army schoolmaster, viz. :—

Assistant, or 4th class schoolmasters, serving with regiments	4
Students in the Normal and Model Schools, Chelsea	29
Pupil-teachers in the Royal Military Asylum and Royal Hibernian Schools	7
Total	40

The casualties among the schoolmasters have been 18 in number, viz. :—

By discharge, &c.	9
By death	9

while the ranks have been recruited by 42 trained schoolmasters from Chelsea.

The reports of the assistant and local inspectors, as well as of the officers commanding regiments, with a few exceptional cases, speak very favourably of the conduct and ability of the army schoolmasters. In the 1st division their conduct has been very good, and the majority of the chaplains speak in the most favourable terms of the readiness with which they labour to give effect to their wishes in the matter of religious instruction. In the 2nd division commanding officers have generally spoken highly of their schoolmasters and schoolmistresses. In the 3rd division the schoolmasters, with one or two exceptions, have been found in possession of the requisite qualifications. Mr. Vicars considers them and the schoolmistresses to be a most respectable class of public servants. At Malta Colonel Romer has found the schoolmasters efficient and able and, with one exception, favourably reported upon by their commanding officers. He dwells on the importance of "tact" as one of the qualifications of a schoolmaster, though he does not distinctly report the want of tact in any of those under his supervision; and Colonel McCrea, his successor, while acknowledging the schoolmasters at Malta to be a correct and excellent class of men, complains of this very want of tact as well as of want of fertility in

resource. In the Toronto division of Canada, Superintending Schoolmaster Stockham speaks very favourably of those under his supervision. Captain Dunn, Superintendent of Army Schools in the Bengal Presidency of India, is perfectly satisfied with the manner in which the schoolmasters discharge their duties. II. Schoolmasters.

Colonel Gleig passes a high and what the Council consider to be a just encomium on the meritorious services of the superintendent schoolmasters in the first division. The Council regret that work should fall so disproportionately on some: but this appears at present to be unavoidable. The superintendence of the schools of a large camp like Aldershot entails very heavy labour, but the work is not easily divided.

One of the greatest difficulties to be encountered in army schools is that of providing the schoolmasters with qualified assistants. Good non-commissioned officers cannot be spared from regimental duties, and privates of superior attainment will not give up promotion to remain as teachers. The Council have been pressed to obtain a greater degree of permanence in the office of assistant schoolmasters, and suggestions have been made from several quarters that these teachers should be borne on the rolls as supernumerary non-commissioned officers. The Council fully recognize the advantage that must accrue to schools by such a measure: but the subject has many bearings and many difficulties, and they have not been able to devise a course which meets these difficulties so far as to receive the sanction of the Commander in Chief.

III. SCHOOLMISTRESSES. III. Schoolmistresses.

The establishment of schoolmistresses on the 31st March 1868 stood as follows:—

Trained Schoolmistresses.

Special - - - -	2
1st class - - - -	24
2nd class - - - -	48
3rd class - - - -	151
Total - - -	225

III. Schoolmistresses.

Besides the above there were

Pupil-teachers and assistant schoolmistresses	33
Monitresses	182
Acting and detachment schoolmistresses	76
Total	291

Making a total of 516 persons engaged in conducting the infant and industrial schools of the army.

The satisfactory reports of the assistant inspectors, &c. have been mentioned in the preceding section.

Schoolmistresses are generally included in the favourable reports made of the school staff. Colonel Gleig impresses on them the importance of strict discipline, and of the union of kindness with firmness in conducting infant schools. In connexion with this subject Mr. Vicars suggests that young schoolmistresses on first being called to duty should be placed under the guidance of more experienced teachers. This the Council are always careful to do, and young women at the commencement of their career are invariably attached to Depôt Battalions or to Artillery Brigades which are to a certain extent stationary, and have experienced mistresses in charge of their infant schools.

Schoolmistresses make frequent complaints to Colonel Gleig against the rule which requires monitresses to receive daily instruction from the schoolmaster, asserting that the services of one monitress are lost to the infant school during the forenoon. Colonel Gleig shows that such a contingency must in general be the result of bad management, and he points out a method of arranging the time table by which it may be avoided.

IV.

Inspection of Schools.

The Inspectional Divisions remain as before.

Division I. is inspected by Lieut.-Colonel Gleig, R. A. It includes London, Aldershot, the South-eastern Military District, Woolwich, Chatham, and Colchester.

It contains usually:—

Adults' schools -	- 61
Grown children's -	- 63
Infant and Industrial -	- 59
Total -	- 183

The following superintending schoolmasters are appointed in this Division.

Superintending Schoolmaster Grant, Woolwich.
" " Belling, Aldershot.
" " Stewart, Dover.

Division II. is inspected by J. P. Sargeaunt, Esq. It includes Scotland, the Northern, Western, and South-western Military Districts. It contains usually the following schools:—

Adults' - -	- 39
Grown children's -	- 44
Infant and industrial -	- 30
Total -	- 113

The following superintending schoolmasters are posted in this Division, viz.:—

Superintending Schoolmaster Barnes, Edinburgh.
" " Kirk, Portsmouth.
" " Savage, Plymouth.

Division III. is inspected by E. A. Vicars, Esq. It includes all the Military Stations in Ireland, and embraces usually—

Adults' - -	- 40
Grown children's -	- 40
Infant and industrial -	- 34
Total -	- 114

Two superintending schoolmasters are posted in th Division, viz.:—

IV. Inspection of Schools.

Superintending Schoolmaster Newsom, Dublin.
„ „ Robertson, Curragh.

Each of the above schools is examined at least once a year by the Assistant Inspector or by one of the superintending schoolmasters; and when the former does not examine, he inspects the school which has been examined by the superintending schoolmaster.

Local inspectors of schools are sometimes appointed to large garrisons abroad. They are selected from the officers of the garrison, their inspectional charge of the schools being in addition to their own duties. The salary is 3*s.* a day. At present there are only two local inspectors, viz.:—

Bt. Colonel H. Smith, Assistant Adjutant-General, Gibraltar.*
Lieut. Colonel McCrea, R.A., Malta.

The army schools in the North American colonies are placed under charge of two superintending schoolmasters viz.:—

Superintending Schoolmaster Stockham, Upper Canada.
„ „ Little, Lower Canada.

These superintending schoolmasters are specially appointed to the stations of Toronto and Montreal respectively; but they are employed occasionally at the requisition of the Council of Military Education in visiting the other Military schools of the provinces.

The scheme for amalgamating the Indian with the Imperial establishments submitted by the Council on 5th June 1863 has not yet been accepted by the Secretary of State for India. Captain Dunn continues to superintend the whole of the schools of the European troops between Calcutta and the Khyber Pass, and although this officer devotes himself to the work with unsparing assiduity, it is impossible for him to make an efficient inspection once a year of the schools in that extended Presidency: he has, however, been able to furnish the Council with annual Reports which will be found in Appendix II.

No annual Reports have been submitted from Madras or from Bombay. The documents received from Lieut.-Colonel Lawrie and Lieut. Jacob are detailed inspection Reports of each regiment examined, very valuable in themselves but not drawn up in a form that would enable the Council to incorporate them in this general Report.

Note.—Since the above was written, a general Report has been received from Lieut.-Colonel Lawrie, dated 14th May 1868, which will be found in Appendix II.

* Since deceased.

V.

State of Education in the Army.

The following table, showing the present state of education in the army, has been deduced from returns, received from the Adjutant-General, of regiments and corps amounting to 169,214 men. The per-centage in the last column is taken from the Council's Report of 1866.

—	Number returned.	Per-centage in 1868.	Per-centage in 1866.
Class 1. Who can neither read nor write.	16,010	9·46	12·25
„ 2. Who can read but not write.	17,924	10·59	16·12
„ 3. Who can read and write.	124,893	73·80	65·47
„ 4. Who have a superior degree of education.	10,387	6·14	6·16

This return does not include fourteen battalions of infantry, one regiment of cavalry, and four companies of engineers, from which no returns have as yet been received.

The following table shows the proportion of "uneducated" among the several branches of the service, comprising under that term Classes 1 and 2 of the above table. The per-centages in the last two columns are taken from the Council's Fourth Report. The improvement is satisfactory.

Corps.	Classes 1 and 2, uneducated.		
	1868.	1866.	1865.
Cavalry	10·90	19·13	19·78
Royal Artillery	18·30	20·42	19·41
Royal Engineers	1·34	3·17	3·34
Military Train	24·37	24·30	38·62
Foot Guards	8·12	8·66	10·06
Infantry of the Line	23·54	33·99	35·71

VI. State of Education in Schools

VI.

State of Education in the Schools.

Adults.

As the educational condition of a regimental school is subject to continual variation, owing to the removal of the better scholars and the introduction of the uneducated recruits, the Council consider it unnecessary to give in detail the state of education in each school. The following, however, is a summary of the reports received from the several inspectors and schoolmasters.

		By Inspectors.	By Schoolmasters.	
Reading.	Learning to read	15·00	17·16	per cent.
	Easy Narratives	30·00	34·48	„
	Books of general Information	55·00	43·40	„
Writing.	Learning to write	32·00	34·50	„
	Dictation from Easy Narratives	33·00	33·90	„
	Do. Books of general Information	30·00	30·00	„
Arithmetic.	Learning to Cipher	35·30	39·70	„
	Simple Rules	15·53	15·00	„
	Compound do.	17·30	15·40	„
	Reduction of Weights and Measures	12·70	13·50	„
	Proportion, Practice, and Mess Accounts	11·60	9·80	„
	Vulgar and Decimal Fractions	5·40	5·16	„
	Higher Rules	0·44	0·59	„

In the ordinary classes of the adult schools little is taught beyond reading, writing, and arithmetic (including soldiers' accounts). If history or geography be added, it is, in general, only by taking the reading lesson from a page in one of those subjects.

Colonel Gleig thinks he perceives the tendency within the ordinary classes to be more and more towards limiting the instruction to rudimentary education, while men aspiring to first-class certificates do not attend the schools but remain in barracks; and if Colonel Gleig is also correct in supposing the rudiments to be now more thoroughly taught than before, there will be no disadvantage in this.

VI. State of Education in Schools.

Captain Dunn indeed reports, that of the schools examined by him in the Bengal Presidency, geography, as a separate subject, was taught in fourteen schools, history in nine, and grammar in six; but he is unable to speak very highly of the results. He suggests the formation of voluntary classes for history and geography; and it is probable that some of the better scholars of a regiment might be attracted by well delivered lectures or lessons. Hindostani is taught in 38 schools in Bengal; but these classes appear to work under disadvantages, the regimental moonshee or teachers being, in Captain Dunn's opinion, not sufficiently acquainted with English to make the necessary explanations to soldier pupils.

In some of the regiments stationed in Malta it is the practice to lend books, slates, &c. to the men, who then are enabled to pursue their studies in barracks; and Colonel Romer reports that this has been attended with advantage. Colonel Gleig proposes to establish such a system by regulation; but, although the Council think this a very good way of employing the leisure hour of the soldier, they prefer recommending it to the notice of commanding officers, and leaving the application of it to their discretion.

Colonel Gleig notices that the progress made by drummers and trumpeters is not so great as it used to be, although there has been no falling off in the amount of attendance. It is not easy to account for this circumstance, but the attention of commanding officers and schoolmasters might with advantage be directed to it.

Colonel Gleig still observes defective classification in some schools, and the Council call the special attention of schoolmasters to this error.

It appears by the report of the same officer, that some schoolmasters remove men from class to class only as a result of periodical examinations. This proceeding obviates one of the advantages which the Council had in view when introducing the new system of classification, viz. the prompt transfer of a pupil from class to class in any one subject, without reference to his attainments in other subjects. The Council desire that schoolmasters will pay attention to this point, although it may cause them some extra trouble in making class lists.

Questions have been raised and suggestions offered regarding classification in the standards of arithmetic in the annual half yearly report. The Council still adhere to the explanation given in Forms A., B., &c., viz. to the effect that a pupil is to be classed as under any standard when he does

VI. State of Education in Schools.

fairly any portion of the work of the standard. Classifying a pupil under standard A. shows that he has satisfactorily surmounted the lower steps B. C. D. E. This does not in any way apply to examinations for certificates of education.

The attention of schoolmasters is called to the necessity of making every man pass an examination before being discharged from school. The books of all discharged pupils are to be kept until they have been seen by the Inspector or Superintending Schoolmaster.

Lieutenant Jacob has supplied the Council with a table showing the result of examination of the schools in the Bombay Presidency in writing from dictation; but, as he has omitted to mention the books from which the dictation was given, no judgment can be formed regarding the advancement of the pupils. The table, therefore, is not included in the Appendix.

Children.

Colonel Gleig and Mr. Sargeaunt observe a falling off from that excellent penmanship which was at one time the characteristic of regimental schools, and Mr. Sargeaunt attributes it to the ambition of schoolmasters to carry their pupils prematurely into dictation. Good penmanship is of so much value to young persons of this class of life, that the Council regard it as of primary importance in the school system; and they trust that schoolmasters will endeavour to restore the character of their schools wherever penmanship has been suffered to deteriorate. The Council request that inspectors and superintending schoolmasters will keep this object carefully in view.

Mr. Sargeaunt remarks that composition is not sufficiently attended to in the children's schools; and the Council consider that where a pupil is sufficiently advanced, the practice of writing letters and answers to questions on some of the subjects of education would be attended with great advantage.

The same inspector finds fault with the practice adopted in some schools of puzzling the brains of the pupils with rules of grammar. The Council fully agree with Mr. Sargeaunt in the expediency of confining the systematic teaching of grammar to the most advanced scholars, as young children learn better by ear and habit than by abstract rules; and grammar is best imparted to them by correcting inaccuracies as often as they occur.

VI. State of Education in Schools.

It appears to Colonel Gleig that the attainments generally of the children are lower than they were some years ago; and he thinks this may be accounted for by the diminution in the age of the children consequent upon the discharge of many parents after completing their first period of service.

Colonel Gleig complains of great irregularity in the attendance of grown children, who appear in some cases to attend or not according to their own or their parents' inclination. The correction of this abuse is in the hands of commanding officers, and the Council take this opportunity of soliciting their aid.

Colonel Smith, at Gibraltar, strongly recommends the system of "home lessons" to the children.

It is gratifying to learn that one of the boys brought up entirely in the school of the Royal Artillery Depôt, Sheerness, has successfully passed a competitive examination for the position of engineer student in the Royal Navy, taking the third place on the list. Other boys from the same schools have obtained similar success; but these have not been educated entirely in an army school.

There appears to be a great opening for the soldiers' children in India; for Lieut.-Colonel Lawrie reports that all the boys of the first class in the Royal Artillery school at Cannanore, have been taken to fill situations in the Post Office and the Telegraph Department.

VII.

VII. Attendance at School.

Attendance.

The Council regret that no improvement is visible in this particular. From Canada, Superintending Schoolmaster Stockham reports that in some of the regiments there are men on the books who have attended school not more than once or twice in the month, and this without any excuse on the score of severe duty. Superintending Schoolmaster Kirk too mentions the case of seven men who numbered among them 23 attendances in six months. Lieut.-Colonel McCrea mentions an instance of a commanding officer who had been indefatigable in his exertions to induce the men to attend school. He established night classes and attended them frequently. He limited promotion as much as possible to certificated men. Yet the result was

VII. Attendance at School.

not encouraging. While he offered pecuniary rewards for regular attendance matters went pretty well, but when these were dropped the attendance dwindled down nearly to nothing. For education itself the men cared little. A limited number had no objection to it provided it was made worth their while, but partial exemption from general duties formed no inducement in itself, schooling being only another kind of work. Of the night classes, containing 30 pupils, 6 obtained certificates, whilst more than half the number remained absolutely stationary in reading and writing after 260 attendances. But there is no necessity for multiplying proofs of the indifference with which the British soldier regards the advantages of education. Even in the French army, where commissions are so freely set before the soldier, and cannot be obtained by the uneducated, it has been found necessary to make attendance at the elementary schools compulsory on the recruit; and the Council entertain a firm conviction that a full return for the money expended will never be attained until compulsory attendance becomes the rule of the service. As a remedy for this evil Colonel Romer recommends that no man's name should be allowed to remain on the books who has not attended once at least during the week, unless satisfactory reasons could be shown for absence. Some restriction of this kind would undoubtedly be useful, but on the whole it is, perhaps, well to leave the matter in the hands of commanding officers, who best know what measures are most likely to encourage their men to take advantage of the schools.

Captain Dunn thinks the attendance is better in the Bengal Presidency than in Europe, the average daily attendance in the former ranging from 40 to 70 per cent. of the number on the school books: the Royal Artillery giving the best attendance.

Under the present system of registration each grade in the adult schools has a separate numerical arrangement. This is represented by Colonel Gleig to occasion considerable trouble without yielding any compensating advantage. The Council hereby authorize all schoolmasters to adopt one numerical arrangement, to include all grades, sergeants, corporals, &c. &c. At the suggestion of Colonel Gleig the index of the register will in future reprints be detached and enlarged, so as to serve for many volumes of the register.

The attention of schoolmasters is called to the necessity of keeping the register with great accuracy and regularity.

VII. Attendance at School.

In September 1867 the under-mentioned numbers were under education in the army schools.

Cavalry and Military Train	2,923
Guards	1,815
Infantry	22,386
Depôts	4,276
Out-Stations	620
Royal Artillery	5,442
Royal Engineers	378
Total	37,840

VIII.

Certificates of Education.

VIII. Certificates of Education.

In Appendix IV. will be found a Return of certificates in possession of corps for 1866–67. The certificates granted during the two years are shown in the several annual Reports of the Inspectors, of which the following is an epitome.

	1st Class.	2d Class.	3d Class.	Total.
1st Division, Lieut.-Colonel Gleig	80	420	1,387	1,887
2d „ Mr. Sargeaunt	38	109	243	390
3d „ Mr. Vicars	109	269	268	646
Malta	9	45	146	200
Gibraltar, Colonel Smith	40	102	81	223
Upper Canada, Sup^{g} Schm^{r} Stockham	7	91	172	270
Lower „ „ „ Little	14	55	72	141
Bengal, 1866 only	12	53	88	153
Giving a Total of	309	1,144	2,457	3,910

In accordance with the permission communicated in the Council's Fourth Report certificates have in most of the divisions been awarded on the results of ordinary annual examinations: hence there can be no general comparison drawn between the number of candidates and the number of certificates. But in the first division, where the number of certificates assumes such large proportions, no certificates have been granted without the intervention of special examinations, and from the Returns of that division the Council are enabled to give the following particulars:

Of 2,895 candidates examined in 1866 and 1867,

80 or 2·76 per cent. obtained 1st class certificates,
420 or 14·51 „ „ 2d „ „
1,387 or 47·91 „ „ 3d „ „
1,008 or 34·82 failed to obtain any certificates.

VIII. Certificates of Education.

Comparing this Table with that of 1865 the only important difference observable is in the proportion of first-class certificates, the per-centage in 1865 having been 6. This, no doubt, is owing partly to the more stringent nature of Colonel Gleig's examination: for if the returns of any other examination be referred to, the proportion of first-class certificates will be found to be much higher. Of 223 certificates granted by Colonel Smith at Malta no fewer than forty, or 18 per cent. were of the highest class, while of 1,887 granted by Colonel Gleig only 80, or 4¼ per cent. were of the first class. Nearly 17 per cent. of the certificates granted by Mr. Vicars and 9½ per cent. of those granted by Mr. Sargeaunt were of the highest class. The discrepancy observable in awarding certificates can hardly be accounted for by different conditions of preparation of the candidates over such large areas of inspection: but is most probably due to difference in the style of papers and in the mode of estimating the answers. The Council have been carefully considering some scheme for remedying what cannot fail to be an evil in the system.

Colonel Gleig is inclined to attribute this falling off to the work in army schools being now more exclusively devoted to the rudiments of education. But on comparing that officer's return for three years it is seen that of the successful candidates 3¼ per cent. obtained first-class certificates in 1865, 5¾ per cent. in 1866, and 3 per cent. in 1867, the average of the last two years exceeding the per-centage of the year 1865.

That these certificates are becoming more appreciated is evident from the great increase in the number of candidates. In the 1st division there were 1,636 last year against 955 in 1865. This proves that a stimulus has been given which cannot fail to act beneficially on the schools.

In Toronto the schoolmaster was permitted to issue a notice pointing out the advantages attendant on the possession of certificates, and this is reported by Superintending Schoolmaster Stockham to have been very successful. Of 346 candidates who came forward at one of the examinations in 1866 the greater number were men belonging to special classes.

Colonel Gleig recommends the addition of a certificate intermediate between the first and the second to meet the views of many commissioned officers who require in their sergeants a higher standard of arithmetic than that which is included in a second-class certificate, but do not regard as necessary a knowledge of any of the extra subjects provided for in a certificate of the first class. Other inspectors

VIII. Certificates of Education.

have expressed similar opinions: but after full consideration of the subject, it was not thought advisable to adopt their suggestions.

Colonel McCrea recommends the addition of a penny to the daily pay of men possessing second class certificates. If this were conceded it would be necessary to add another penny for the possession of a first-class certificate; and although a money reward cannot fail to act as a strong stimulus to exertion, the Council do not feel themselves at liberty to recommend that soldiers should be rewarded directly from the public purse for the acquisition of accomplishments which so greatly affect their own interests. The country already offers on a most liberal scale the opportunity of obtaining an education which cannot fail under ordinary circumstances to repay the soldier by promotion while in the army, and by procuring for him civil employment on his discharge. In Appendix IV. No. 2. will be found an extract from the regimental orders of the Royal Scots Greys defining the qualifications necessary for promotion; and if such rules were of general application no other inducement would be necessary.

Certificates do not appear to be made available to soldiers in the Bombay Presidency. Lieut.-Colonel Lawrie reports that they have been sanctioned for the troops serving in Madras by the Commander-in-Chief in that Presidency. In Bengal the system is in operation: but Captain Dunn finds few candidates, stating as a reason, that the soldier thinks the attainment of a third-class certificate too easy, and that few men study with the special object of obtaining the higher certificates. The Council do not consider this argument to be very convincing: they think that when the system becomes better known among the troops, and when commanding officers shall make educational acquirements necessary for regimental promotion, the men will not be backward in qualifying for third and second class certificates.

The Council observe that Captain Dunn has used a wise discretion in forbearing to examine for certificates at the ordinary annual examinations, when, from want of space or from other causes, due precautions could not be used to prevent the candidates from copying or from obtaining assistance from one another. This discretion is recommended for imitation to all inspectors and superintending schoolmasters who propose to grant certificates at the ordinary annual examinations.

One Inspector reports that many men otherwise well qualified for second-class certificates were rejected for their

VIII. Certificates of Education.

want of knowledge of Savings Bank accounts. The attention of schoolmasters is directed to this point.

IX.

IX. Special Classes.

Special Classes.

The Council observe a growing appreciation of the advantages to be derived from special classes; and they hope that as these advantages become known, special classes will increase considerably in number, and be constituted more in accordance with the system advocated by the Council.

In the 1st division there were in 1866, 23 special classes in which the system is reported by Colonel Gleig to have been thoroughly carried into effect, with the usual excellent results. In the following year there were 36 such classes.

In the 2d division special classes were reported by Mr. Sargeaunt to be rare in name and non-existent in reality.

In the 3d division Superintending Schoolmaster Newsome made in 1867 a very favourable report upon a special class in the 1st Battalion 34th Regiment, then at the Curragh. This was a small class of 17 men commenced in July. They gave 3½ hours attendance for five days per week, and were called upon to do work at home in reading, writing, arithmetic, and spelling. The men took to the work cheerfully, and the results, tested by examination, were highly satisfactory, and at the end of six months twelve of the class were capable of passing for full corporal. During 1867 special classes were almost entirely suspended in Ireland.

At Gibraltar and Malta the severity of garrison duty appears to be fatal to the system, although in 1866 all the corps at the former place had special classes. One exception is, however, reported from that station, where the 15th Brigade, Royal Artillery, keep up special classes with extreme care. Two men selected from each battery having once joined the class are never permitted to be absent from it without special leave, excepting on Saturday, when they mount guard. The schoolmaster has orders to make a report direct to the commanding officer of any absentees.

In Canada the system has met with special favour, and the effects of a general order issued by the Lieut.-General in command at the end of 1865 are still apparent. The

attendance is purely voluntary, and the privilege is much esteemed by the men.

Colonel Peacocke, in command of 1st Battalion, 16th Regiment, writing from Hamilton, Canada, says: "The "special classes have been continued through the past "winter with very favourable results. I consider they "afford the only means by which an appreciable effect can "be produced on the education of the soldier.

Colonel Lowry, commanding the 47th Regiment in Nova Scotia, reports in similar terms. "A special class of about 30 men has been under instruction, and exempt from the performance of almost all other duties, guards excepted, for nearly five months. The results are satisfactory; and I consider the system to be productive of great good, and to be specially suited to the winter season in this country, where much out-door occupation is not possible. Promotion to all ranks is made to a considerable extent dependent on educational proficiency, as tested by examination."

Captain Dunn reports that there were in 1867, 23 special classes in the Bengal Presidency, averaging 25 men each on the roll, with an average daily attendance of 15. One regiment, the 1st Battalion, 11th Foot, had the large average attendance of 54. Major Roe, commanding this regiment, gives the following account of the class.

"In April last (1866) I called for 80 volunteers, an "average of 8 men per company. This call was quickly "responded to, and these men formed a special class, which "has been working ever since, with the average daily "attendance of 54. The results, as shown by the book, "are so much more satisfactory than usual among the men "that I have determined upon carrying on the system by "forming fresh classes every six months."

Lieutenant Jacob, Superintendent of Army Schools, considers that the system of special classes had not (in 1867) grown into favour in the Bombay Presidency. He mentions four in the Royal Artillery, one in the Cavalry, and five in the Infantry: but observes that many of these, although called "special classes," are not formed in accordance with the system proposed by the Council, and that their speciality consists in attending more regularly than the ordinary classes. The Council, however, have knowledge of one striking exception to the general rule. In the 26th Cameronians, two special classes are formed, the higher one for men who are likely to become non-commissioned officers, the lower class for gradually educating all men of the regiment until they obtain third-class certificates.

IX. Special Classes.

The strength of the class being limited, the best soldiers are taken first, and candidates are never wanting. The commanding officer, Lieut.-Col. Henning writes: "The "scheme has now been in working order for more than "twelve months, and the results have been most satisfac- "tory. A friendly competition exists among the non-com- "missioned officers, which induces them to employ their "leisure time to some advantage; and while to a com- "manding officer the fact of having a number of men "aspiring to promotion, and eligible for it, is an assistance "of no small consideration, it cannot fail in having a most "wholesome effect on the conduct of all in possession of "superior rank and regimental appointments."

The Regulations regarding education and promotion enforced in this regiment will be found in App. IV. No. 3.

It is stated in a report from the Rev. T. R. Maynard, that in the French army, where every illiterate soldier is compelled to attend school, a system very similar to that of our special classes has been introduced, owing to the impossibility, from want of schoolroom accommodation, to teach all the recruits of a regiment at one time.

X. Examinations.

X.

Examinations.

Under existing Regulations an Army School, whether of adults or grown children, is subject to the following examinations annually, viz.:

1. One annual examination by the Assistant Inspector or superintending schoolmaster;
2. Two half-yearly examinations by the schoolmaster;
3. One examination by the schoolmaster, prior to the annual examination by the Assistant Inspector or superintending schoolmaster;

Making in all four examinations; but one of the half-yearly examinations is dispensed with whenever the inspection takes place within two months of the holidays; and as the Assistant Inspector and superintending schoolmaster have been requested to arrange their visits as far as possible with regard to that object, the annual examinations will most generally be reduced to three.

In conducting the half-yearly examination it is the practice in some regiments to allow the men to drop into the schoolroom according to their individual pleasure, by which means the work of each examination is spread over a period of many weeks, to the great obstruction of the

regular business of the school. This is enough to bring into disrepute the whole system of examinations, which is otherwise calculated to be very useful. A better practice obtains, however, in other regiments. One, two, or three days, according to the size of the school, are set apart; and all the men on the school books are ordered to attend by squads. X. Examinations.

Captain Dunn reports that in India the men under instruction are allowed to work their questions on the slate, and after correcting their work to copy it into the examination books. Captain Dunn however properly finds fault with this practice, which must tend to frustrate the object of the examination. Colonel Gleig makes similar objections, and even shows from actual experiment that the work done by first effort is generally better than that which is entered in the books. The Council fully concur in condemning this practice, and they desire that the Inspectors and schoolmasters will disallow it at all examinations.

The expediency of remitting the Midsummer half-yearly examinations by the schoolmasters with the troops in India has been pressed upon the Council with arguments so satisfactory, that they have addressed the Adjutant-General of the Army recommending the measure.

XI.

Children's Schools.

XI. Children's Schools.

Full descriptions of the organization of the schools for young children are to be found in the former reports of the Council, as well as in the regulations for army schools, of 25th May 1863.

The accounts received of these schools for the past two years have been satisfactory, the attendance of children being generally regular. In September 1867 the following numbers were under instruction :—

Boys - - - -	4,960
Girls - - - -	3,614
Total - -	8,574

In India there appears to be a prejudice against the mixed system of education, which is found to be so beneficial elswhere ; and at many of the Indian cantonments the girls are placed entirely under the schoolmistress.

XI. Children's Schools.

The Council consider this arrangement as very detrimental to the education of the girls, and they are satisfied that it cannot be necessary under ordinary measures of instruction. Captain Dunn speaks strongly of the disadvantage thus caused to the girls in the schools of the Bengal Presidency.

Infant Schools.

In September 1867 there were attending the infant school :—

Boys - - - -	5,051
Girls - - - -	5,400
Total - -	10,451

The reports of these schools are very favourable.

Colonel M'Crea gives in his report the full account of a German system of imparting the earliest lessons in reading. It is a sort of game with letters; the letters of the alphabet being painted or stamped upon counters. It is without doubt a good method, and it can be tried with letters written or printed on card: but the Council apprehend that counters of a permanent nature would be very expensive, each school requiring a large number of alphabets.

With reference to the objection made by the Council in their fourth report to the custom of teaching infants to write, Captain Dunn suggests that this should not apply to the mere formation of letters on the slate, which is found to be useful as an aid to the reading lesson, as well as an amusement to the children. The Council concur with Captain Dunn; it was only to formal lessons in writing that the objection referred.

It appears by Captain Dunn's report that the home system of a graduated scale of salary for pupil teachers (see Army School Regulations, Section 74.) has not been adopted in the Bengal Presidency. The Council would draw the attention of the local Government to this point, which is one of some importance to the efficiency of the schools.

Industrial Schools.

On the 30th September 1867 there were attending the industrial schools 10,681 children.

Judging by the reports of ten Inspectors these schools are doing good and valuable service. At the scholars' exhibition at Toronto in 1866 the work of these schools occupied three stalls.

XII.

Religious Instruction.

The children's schools are opened with prayer, which is followed by a Bible lesson, the attendance being voluntary.

Colonel Gleig observes that the results of the established system of religious instruction continue to be favourably reported on by many chaplains, not all of whom however have assumed the direction of the Bible lessons.

Mr. Sargeaunt speaks in high terms of the system pursued by the Schoolmaster of the 6th Brigade, Royal Artillery, who, being apparently unassisted by any chaplain, takes the children through a regular course of carefully prepared lectures. This is assuredly better than giving discursive lessons suggested by the epistle and gospel of the week; and it is to be hoped that army chaplains may be able to sketch out for the schoolmasters a connected course of instruction in both the Old and the New Testament, which may have the effect of imparting a sound knowledge of the principles of Christianity as well as of sacred history.

XIII.

Royal Military Asylum, Chelsea.

This institution consists of a school for orphan boys of soldiers of the regular army, established in 1803, and of a Normal school for training army schoolmasters, established in 1846.

Normal School.

This establishment comprised, on the 31st March 1868, 29 students, of whom 7 were civilians, 4 pupil teachers, and 18 soldiers.

Of the above persons 15 are in the Normal, and 14 in the Model Schools.

The following were admitted between 1st April 1866 and 31st March 1868 by competitive examination:—

4th Class Schoolmasters - -	2
Pupil Teachers - - -	7
Civilians - - - -	8
Non-commissioned Officers and Soldiers -	23
	40

The result of the several examinations of the 1st division of students during the last two years is shown in App. VI. No. 1.

XIII. Royal Military Asylum, Chelsea.

Model School.

The authorized establishment of boys at Chelsea Asylum is 500. The actual number on the 31st March 1868 was 486 of the following ages:—

Under 6 years - -	3
From 6 to 7 years - -	9
„ 7 to 8 „ - -	32
„ 8 to 9 „ - -	56
„ 9 to 10 „ - -	44
„ 10 to 11 „ - -	88
„ 11 to 12 „ - -	80
„ 12 to 13 „ - -	71
„ 13 to 14 „ - -	88
„ 14 to 15 „ - -	14
„ 15 to 16 „ - -	1
Total - -	486

The boys are received between the ages of 5 and 10 years; and, under ordinary circumstances, they are not kept after 14.

The elder boys are instructed either in music or in trades, the distribution being at present as follows:—

Musicians - - -	100
Drummers and fifers - -	68
Tailors - - -	63
Shoemakers - - -	79

The following table shows the number of boys who have been discharged from the Asylum since 31st December 1860.

Years.	Average Strength.	Number of Boys whose Time expired.			Number of Boys reported fit for the Army.		
		Fit for Army.	Unfit.	Total.	Volunteered for Army.	Remained as Monitors.	Delivered to their Friends.
1861	410	42	4	46	39	—	6
1862	410	65	11	76	52	3	19
1863	410	92	11	103	77	1	24
1864	497	69	20	89	43	1	45
1865	497	14	6	20	12	—	8
1866	496	63	15	78	46	—	17
1866-7	496	77	14	91	59	—	18
1867-8	490	70	19	89	55	—	33
Total		492	190	592	383		170

It thus appears that of 180 boys discharged during the last two years 114 boys or 63 per cent. volunteered for the army, while 33 boys or 18 per cent. were found to be unfit for the army. This contrasts unfavourably with the Report from the Royal Hibernian School in which only 5 per cent. are returned as unfit. The evil appears to be increasing, for the average of 8 years gives only 17 per cent. and the proportion for 1867–68 is actually the worst of all, being 21 per cent.

The following Table is formed from the annual Reports furnished by regiments of individuals serving in the army in 1866–67 who were educated at the Royal Military Asylum. The complete Returns for 1867–68 have not been received at the asylum.

Rank.		Character.	
Officers	2	Exemplary	32
Staff Serjeants and Serjeants	57	Very good and good	545
Band Masters	3	Indifferent	30
Drum and Trumpet Majors	13	Bad	9
Corporals and Bombardiers	49	Very bad	—
Drummers	164		
Privates	328		
Total	616	Total	616

Of the pupils of this establishment known to be in the army two are commissioned officers, while 20 per cent. are non-commissioned officers. This is very satisfactory considering that a large majority of the boys who enlist in the army are placed in regimental bands.

Educational Department.

This consists of a head master, assisted by four masters, and, on the 31st March 1868, by 22 pupil-teachers, fourth-class masters or students.

The educational condition of the school is exhibited in the following statement. The school consisting of 499 boys, there are,—

Acquiring religious knowledge	473
Learning reading	473
„ writing on slates	33
„ „ on paper	440
„ „ from dictation	350

XIII. Royal Military Asylum, Chelsea.

Learning arithmetic, slate - -	473
„ „ mental - -	473
„ Euclid - - -	33
„ outlines of natural philosophy	33
„ geography - - -	350
„ English grammar - -	350
„ analysis of sentences -	91
„ etymology - - -	121
„ English history - -	350
„ Colonial - - -	87
„ model drawing - -	63
„ vocal music - - -	213
Object lessons are given to - -	382
Learning "Paradise Lost" - -	33
„ "Deserted Village" - -	28
„ Miscellaneous Poetry -	170

The Rev. Canon Moseley, who has examined the school half-yearly, has given a Report which will be found in Appendix VI. No. 2. This school possesses many advantages. The boys generally remain several years, during which time regularity of attendance in the classes is rigidly enforced. The masters are picked men, and the head master, Mr. McLeod, is a gentleman of great ability and experience. Under such favourable circumstances good results may reasonably be expected, and the report of Canon Moseley shows that these expectations are not disappointed. The boys of the first school, for there are five schools or classes, read with ease and intelligence such poetry as that of the "Paradise Lost," and they are taught to analyze the sentences. They write remarkably well from dictation; they work well in arithmetic up to practice and vulgar fractions, and they have a good elementary knowledge of geography and English history. The model drawing of the boys gained the commendation of the examiner, the Rev. W. Kingsley. All are taught vocal music and some become good instrumental musicians. Canon Moseley considers that fifty per cent. of the boys on leaving school have reached a standard of attainment equal to that of the more advanced boys in a middle class school of the best kind: thirty-three per cent. have reached about the standard of the most advanced boys in a national school, while seventeen per cent. are dull and indolent boys.

A large number of boys were on the sick list during Canon Moseley's inspection, amounting to 8 per cent. of the establishment, which the Council consider a much larger proportion than ought to exist in such an establishment.

XIV.

Royal Hibernian Military School.

This establishment for the orphan sons of soldiers is situated within the boundaries of the Phœnix Park, Dublin, in a most salubrious spot.

On the 31st March 1868 the school consisted of 410 boys of the following ages :—

Under 8 years	10	From 14 to 15 years	5
From 8 to 9 years	33	„ 15 to 16 „	1
„ 9 to 10 „	57	Appointed, but not joined	10
„ 10 to 11 „	79		
„ 11 to 12 „	64	Total	410
„ 12 to 13 „	75		
„ 13 to 14 „	76		

The following return shows the educational condition of the Royal Hibernian Military School on the 31st March 1866.

Learning to read	400
Writing on slates	61
„ on paper	339
„ from dictation	251
Preliminary exercises in dictation, on slates	149
Arithmetic on slates	400
Arithmetic (mental)	251
Algebra	26
Mensuration	26
Elementary exercises in mechanics	26
Geography	400
English history	400
„ grammar	251
Etymology	62
Analysis of sentences	62
Drawing	251
Sacred history	400
Vocal music	208

XIV Royal Hibernian Military School.

The following is the distribution of the boys who are taught to work at trades:—

Musicians	22
In training for musicians	36
Drummers and fifers	45
Buglers and trumpeters	28
In training for ditto	6
Shoemakers	40
Tailors	112
Carpenters	8
Total	297

By the following return it appears that of 190 boys whose time has expired during the two years ending 31st March 1868, 181 boys were reported fit for the army, and that of these 148 or 82 per cent. enlisted for the army, while 5 remained as monitors; 9 boys or 5 per cent. were reported unfit for the army, and of these one was appointed to a trade.

RETURN showing the proportion of Boys who have volunteered for the Army, &c. from 1st April 1867 to 31st March 1868.

Years.	Average Strength.	Number of Boys whose Time expired.			Distribution of Boys reported fit for the Army.			Distribution of Boys found unfit for the Army.		Remarks.
		Reported fit for the Army.	Reported unfit.	Total.	Enlisted for the Army.	Remained as Monitors.	Delivered to their Friends.	Apprenticed to Trades.	Returned to their Friends.	
1866-7	410	86	5	91	68	2	16	1	4	
1867-8	410	95	4	99	80	3	12	0	4	
		181	9	190	148	5	28	1	8	

ABSTRACT of the Number of Boys formerly in the Royal Hibernian Military School, and serving in the Army on 1st January 1868 (date of last Returns from Regiments).

Rank.	Number in each Rank.	Character.	Number.
Officers	8	Exemplary	50
Bandmasters	10		
Serjeant-majors	1	Very good	214
Enlisted schoolmasters	18		
Quartermaster-serjeants	4	Good	602
Troop serjeant-majors	2		
Colour-serjeants	21	Indifferent	46
Trumpet and drum-majors	8		
Serjeants	40	Bad	14
Orderly room clerk	10		
Paymaster's clerks	5	Very bad	1
Lance-serjeants	8		
Corporals	50		
Lance corporals	19		
Bombardiers	15		
Musicians	708		
Drummers			
Gunners			
Sappers			
Privates and Boys			
Total	927	Total	927

It is very satisfactory to observe by the above returns, that of 190 boys whose time expired during these two years, only 9 were found unfit for the army, and that of the remaining 181 boys, 148 joined the army, while 5 remained as monitors, with the view of becoming army schoolmasters: giving a total of 153 or 80 per cent. to the service, a proportion, as the Commandant justly remarks, "both large and unprecedented." Colonel Wynyard calls attention also to the very favourable results shown in the abstract, where it is seen, that of 927 pupils of this school now in the army, 8 are commissioned officers, and 211 or 23 per cent. are non-commissioned officers: a very large proportion, considering how many must be either under age or detained as privates in the band.

In Appendix VI. No. 3. will be found the joint report of the gentlemen who examined the school for "Crimean Banquet Prizes" in December 1866. Of these gentlemen, one is Head Inspector, the other is District Inspector of schools under the National Board. According to their united testimony the boys evinced a degree of knowledge on the

XIV. Royal Hibernian Military School.

prescribed subjects considerably in advance of what is usually attained by lads of higher social position; while at the same time marked excellence had been shown in reading, writing, and arithmetic. The examiners consider the instruction to be of a thoroughly practical nature, with reference to the probable future of the boys; while the conduct of the boys gave evidence of the excellence of the discipline maintained in the institution. The Report of the same examiners in December 1867 is similarly satisfactory.

The Commandant has pointed out a few errors that occurred in the Council's Fourth Report: viz. at page xxxix. the number of boys learning the shoemaking work should have been 38 instead of 33, and the number 49 should take the place of 48 in the column headed "enlisted for the army." Also at page 96 of the Appendix, the candidates named respectively "Ovens," "Marshall," and "Reilly," should have been returned as pupils of the Royal Hibernian Military School.

XV. Lectures.

XV.

Lectures.

The lectures have been well attended and appreciated by the soldiers, and, with one exception, all the authorities speak favourably of them. Mr. Vicars declares them to have been generally attended by large audiences, more especially so when the magic lantern was brought into use. At Gibraltar, Colonel Smith says, the lectures were always well attended; and the men derived much amusement from them. From Portsmouth, Superintending Schoolmaster Kirk writes:—"I may remark that all the lectures this "season have been given before tattoo, and while the "canteens were in full operation; and although strenuous "exertions were made in the town of Portsmouth, during "the winter, to provide entertainments of various kinds, "with the view of enticing the soldiers from their barracks, "I have much pleasure in stating that the attendance at "the lectures this season has been fully equal to that of "former years." At this station the school department received very kind assistance from the Venerable Archdeacon Wright, chaplain to the forces, who gave several valuable lectures to the men. Lieut.-Colonel Moffat in transmitting the lists of lectures given at Kingston in Canada, bears testimony to the great amusement afforded to the soldiers by the lectures, especially by those on scientific subjects, at which he was present. Colonel Greer,

C.B., commanding 68th Regiment, makes very favourable mention of the attempts that have been made to amuse and instruct the men of that regiment, and he speaks from personal observation. Colonel Langley commanding the 2d Battalion, 16th Regiment, writing from Barbadoes, after stating that 20 lectures had been given by the schoolmaster during the winter 1866–67, interspersed with musical and literary entertainments, observes: — "The "entertainments are very popular with the soldiers and "their friends; especially the historical lectures, and those "on popular subjects; and they help to make the school "and the teachers much more prized by the men." All these lectures and entertainments, one only excepted, were given and managed by Army Schoolmaster Porter.

Lieut.-Colonel M'Crea, Local Inspector at Malta, takes a different view, and thinks that the lectures will never become popular with the men; and he considers those illustrated by the magic lantern to be especial failures. He would be sorry to see the system continued, and would recommend readings instead, reserving the lantern for the entertainment of the children at Christmas.

The same officer, however, in forwarding, a few months later, a return of lectures and readings for the season 1867–68, is "glad to add, that his Excellency Lieut.-General "Sir Patrick Grant has shown himself no mean supporter "of this instructive kind of recreation, not a little contri-"buting in this way towards its success;" and Schoolmaster Porter, 1st Battalion, 16th Regiment, stationed at Malta, reports that the favourite subjects of these lectures were "history and geography, illustrated by the lantern."

It appears by the reports of Captain Dunn and Lieut.-Colonel Laurie that very few lectures were given to the troops in the Presidencies of Bengal and Madras. Lieut. Jacob at Bombay is silent on the subject.*

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* The under-mentioned lectures and entertainments were not enumerated in the Council's last Report.

St. Helena, 1865–66.—Four lectures, illustrated by the magic lantern, interspersed with songs, were given by Sergeant O. Edmonds, 1st Battalion, 10th Foot.

Cape of Good Hope, King William's Town, 1866.—Schoolmaster Kidd gave seven lectures, illustrated by the lantern, and Major Redding, 10th Foot, gave one, illustrated by plans and maps; Schoolmaster James Northway, of the Cape Mounted Rifles, gave, during 1866, seven lectures, illustrated by the lantern, and one reading; Lieut. Poole, R.A., gave one illustrated lecture.

The Council here notice an error which occurred at page 108 of their Fourth Report. Owing to the confused manner in which the list from Plymouth was drawn up, Army Schoolmaster Fry was credited with only four lectures during the season 1865–66, when he delivered ten.

XV. Lectures. The Council publish as usual the memorandum drawn up by Mr. McLeod, Head Master of the Model School, Royal Military Asylum, who superintends with great pains and success the circulation of the slides and other details of what is now become a very extensive institution. This memorandum will be found in Appendix VII. No. 1.

XVI.

XVI. Garrison Libraries.

Garrison Libraries.

In Appendix VIII. will be found a list of garrison libraries, including those of the Royal Artillery and Royal Engineers for March 1868.

The aggregate number of volumes in these libraries is 211,278, showing a net increase of 7,565 volumes since March 1866. During these two years 18,967 volumes have been added by purchase from the funds, and more than 3,500 have been added on account of libraries brought for the first time upon the list; but there has been a heavy deduction of 15,018 volumes by loss, wear and tear, &c. In 59 instances the number of volumes has been reduced, and in some of these the decrease bears so large a proportion to the whole as to threaten early extinction. All the above libraries, 59 in number, are, except those of the Royal Artillery at Woolwich, very small libraries, where the subscriptions are insufficient to cover the expense of repairs and renewals.

The circulation during 1867–68 has amounted to 373,895 volumes, being 114,609 less than during the year 1865–66. This falling off is probably in a great degree accounted for by the heavy duties that fell upon the troops stationed in Ireland.

The contributions received from Recreation Rooms funds amounted during the past year to 2,450*l.* 19*s.* 10*d.* including the salaries of the librarians, which are provided in excess of the obligatory quarterly contribution of 5*s.* per troop or company.

The salaries of the librarians amounted to 654*l.* 12*s.* 6½*d.*, not including those of a few permanent librarians, which are defrayed from the public funds. Deducting this from the amount of contribution above mentioned, there was a sum of 1,796*l.* 7*s.* 3½*d.* left for purchasing new books and repairing old ones, as well as for supplying stationery to libraries.

The libraries continue to give great satisfaction, though the Council doubt much whether their utility is sufficiently

developed. In their Third Report the Council brought to prominent notice some suggestions of Lieut.-Colonel Gleig's recommending that a larger proportion of the whole number of volumes composing a garrison library should be in the hands of the several regimental librarians, for the purpose of placing the works more immediately before the soldiers, and of thus tempting them to read the better classes of literature; and the Council would again press this scheme upon the attention of library committees. XVI. Garrison Libraries.

The Rev. T. Maynard, chaplain to the forces, who long took deep interest in managing the garrison library at Canterbury, has placed before the Council some interesting statistics regarding that library, which will be found in Appendix VIII. No. 2.

Great trouble had been taken to supply the soldiers at Canterbury with catalogues, and this appears to have had good effects, for although the demand was greater by far for works of fiction,—there being 4,694 issues for 500 volumes of this class during one year,—still the other classes of books, including poetry and science, were not entirely neglected.

Besides the garrison libraries at Chatham there is a Soldiers' Institute, which combines library and recreation rooms. It is supported chiefly by the troops, but is not under the control of the Council. The manager, however, has informed them that during the year ending 31st December 1867, the circulation amounted to 39,492 volumes.

XVII.

Recreation Rooms.

XVII. Recreation Rooms.

On the 31st March there were 212 establishments, of which—

107 possessed only one room
105 „ two rooms
116 were provided with refreshment bars.

The number of establishments has slightly increased since the date of the last Report.

The number of subscribers on 31st March 1868 was 59,647, showing an increase of 4,351 since 1866.

The amount of subscriptions in addition to the Government allowance was 5,939*l.* 10*s.* 7½*d.*, showing an increase of 115*l.* 15*s.* 0½*d.* The salaries of the attendants (regimental librarians) amounted to 1,379*l.* 7*s.* 6¾*d.*

The Council have received no returns from the many regiments and brigades serving in India.

XVII. Recreation Rooms.

These institutions are admirably suited to the requirements of the soldier, their beneficial effects are frequently mentioned by commanding officers, and it is much to be regretted that each corps cannot be supplied with two rooms.

Besides the Soldier's Institute at Chatham, mentioned in the preceding Section, there is an institute at Aldershot supported by voluntary subscription, to which the soldiers have access. The Council receive no report from this establishment.

The Council take this opportunity to notice a report by the Rev. T. Maynard on the French system of military education. This gentleman, during a long visit to Paris, devoted much attention to the system of education newly adopted in the Imperial army, and at the request of the Council he was commissioned to report thereon. This report was transmitted to the Secretary of State for War on the 29th of June 1868, and the Council understand that it will be printed.

The principal features of the system are as follows:

Education up to a certain point is compulsory. Every French recruit, unless previously educated, is compelled to enter the lower school of the first degree after completing so much of his drill as to be qualified to mount guard. The education here given is about equal to that which is required in our school for obtaining the third class or lowest certificate. Next above this is the school for the education of the class of "elèves caporaux," a preparatory class for the junior grades of non-commissioned officers. The amount of education here acquired is about equal to that necessary in our schools for obtaining a second-class certificate. Then follows the school of the first degree, which all non-commissioned officers must attend, including those who aspire to commissions. Non-commissioned officers are obliged to acquire an amount of education about equal to that which is represented by our first class certificates.

These schools are confined entirely to the adult soldier and musician. Marriage being unrecognized in the French army there is no provision made for soldiers' children, whose education under the British system gives occupation to so large a staff of instructors, and absorbs so great a portion of the educational grant.

All the schools are conducted by commissioned officers who officiate as schoolmasters. No pecuniary remuneration

is given, but they are relieved from all other duties. They are assisted by non-commissioned officers who receive a small fee for each day of attendance.

There are no buildings especially set apart for school purposes. The men are paraded in a barrack room or any other convenient chamber, but without special furniture. Each pupil, being supplied with a portable tablet which is slung by means of a shoulder-strap, stands as on parade during the lesson.

The system is thus made very inexpensive. Officers are found willing to devote an hour or two daily for five days of the week on consideration of being relieved from all other duties; and very capable assistants are found in the non-commissioned ranks, who see in a zealous discharge of scholastic duties a stepping stone to promotion.

The actual method of teaching, the invention of M. Roland, is to ordinary school subjects what that of Mr. Hullah is to music. A class of pupils is taught on the simultaneous principle; a practical instructor gives out the syllable, the word, or the arithmetical figure, which is repeated by each individual of the class. The text book for the lower school, for reading, grammar, and arithmetic, consists of a pamphlet of twelve sheets, and the New Testament appears to be used for the more advanced reading lessons.

The Roland system, which is on its trial in the French army, does not appear to be approved of by the Minister of Instruction in the civil departments. But Mr. Maynard's Report contains many points which the Council have found worthy of careful consideration.

(Signed) W. Napier, Major-General,
Vice-President.
F. Abbott, Major-General.
Henry Moseley.
E. H. F. Pocklington, Colonel.
E. B. Hamley, Colonel.

APPENDIX.

Appendix I.—No. 1.

Alphabetical List of Army Schoolmasters.

Class.	Name.	Class.	Name.
Army	Abbott, John.	Army	Calladine, T.
2	Alderton, F.	Army	Capon, A. R.
Army	Aldwell, W. B.	1	Carnegie, C.
2	Allen, B. C.	2	Carroll, J.
Army	Anderson, T.	Army	Carson, T.
Army	Annett, E. J.	Army	Carthew, E.
Army	Annett, G. L.	2	Cartwright, J.
Army	Armstrong, R.	2	Chambers, J.
Army	Arthur, W. M.	2	Clarke, C.
Army	Assan.	Army	Clarke, P. H. T.
Army	Astbury, J.	1	Clift, C. W.
Army	Atkinson, C.	Army	Cochrane, H.
3	Atwell, A. H.	Army	Colquhoun, W.
		Army	Comerford, J.
Army	Bacon, E.	Army	Compton, J. B.
Army	Bacon, W.	Army	Coo, C. S.
Army	Barnes, A.	Army	Cooper, A.
Army	Bartram, W.	2	Curtis, G. E.
Army	Baskerville, R. C.		
Army	Bass, J.	Army	Davidson, J.
Army	Bastow, E.	Army	Davies, D. J.
Army	Bateman, R.	Army	Davies, James.
Army	Bell, John L.	Army	Davison, T.
Army	Bell, R.	2	Devereux, A.
Army	Belling, R.	Army	De Winter, J.
Army	Berresford, J.	Army	Dorman, J.
Army	Bingham, J.	Army	Douthett, A.
1	Bird, W. H.	Army	Dunnett, G. L.
Army	Black, M. A.	2	Dunn, F. W.
Army	Blake, C.		
Army	Boland, J.	1	Earp, T.
2	Bolus, F.	Army	Edmond, A. W.
Army	Boughton, G. H.	Army	Eldridge, J. E.
Army	Bramhall, E.	Army	Etler, C.
Army	Broome, T. A.	Army	Ewart, P.
Army	Brown, J.		
Army	Brown, W. J.		
Army	Bryan, W.	Army	Fenton, G.
Army	Burgham, J. A.	Army	Fleming, C. M.
Army	Burns, J.	Army	Fletcher, C.
Army	Burton, T. W.	Army	Flinter, T.

App. I.

No. 1.

Class.	Name.
Army	Flood, H.
Army	Flood, John.
Army	Fodringham, W. N.
Army	Forde, J. F.
Army	Foster, J. H.
2	Fowler, C. B.
Army	French, J. W.
Army	Fryer, W.
2	Gell, W.
Army	Gilbert, J. A.
1	Giles, E.
Army	Gillmore, J. W.
Army	Gilmore, James.
2	Goadby, S. H.
Army	Goodwin, W.
Army	Gooding, R.
Army	Gooding, W.
2	Grant, John.
Army	Green, George.
Army	Greene, P.
Army	Gunn, J. R.
Army	Halfpenny, W.
Army	Hall, W. R.
Army	Hamilton, G. B.
Army	Hanley, W.
Army	Harris, J. L.
Army	Hawkins, W.
Army	Haydod, C.
Army	Hayes, J. J.
Army	Hazard, J.
Army	Hebb, H. H.
2	Henderson, J.
Army	Henry, J.
2	Hickling, J. S.
Army	Hicks, C.
Army	Hill, W. J.
Army	Hobbs, J.
Army	Holland, G.
Army	Holloway, J.
Army	Hopkins, J.
Army	Howard, S.
Army	James, T. W.
Army	Jesse, Henry.
Army	Jones, T. W.
Army	Kavanagh, J. J.
Army	Kearns, J. W.
2	Keley, H.
Army	Kenny, R. T.
Army	Kidd, J.
Army	Lacey, J.
Army	Langford, W.

Class.	Name.
Army	Le Mar, W.
Army	Loftus, M.
1	Lowman, E.
Army	Lowry, F.
Army	Macartney, E. K.
Army	Macartney, George.
Army	Mahoney, J.
Army	Major, F. J.
Army	Mallandain, C.
Army	Mallory, F.
Army	Marshall, J.
Army	Masterson, J.
Army	Matthews, L.
Army	M'Ardle, J.
Army	M'Caskery, G.
Army	M'Cormick, J.
Army	M'Elwee, A.
2	M'Ewen, W.
Army	M'Governe, R. W.
2	M'Ilherron, D.
1	M'Kay, D.
1	M'Kinder, W. M.
Army	M'Lean, James H.
Army	M'Lean, J. W.
2	M'Lean, R.
Army	M'Mahon, Arthur.
Army	M'Mahon, Thomas.
Army	Mills, P.
Army	Minnion, W.
Army	Moore, J.
Army	Moore, Thos. C.
2	Moran, J.
Army	Morgan, W. G.
Army	Morrison, D.
Army	Munro, W.
Army	Murray, J. H.
Army	Myatt, C. W.
Army	Myles, W. E.
Army	Naylor, C.
Army	Northway, J.
3	O'Brien, Wm.
Army	O'Connor, T.
Army	Ogg, G.
Army	Ovens, H.
Army	Palmer, R.
1	Parsons, A.
Army	Payne, W.
Army	Peel, T.
Army	Pell, R.
Army	Perkins, J. C.
Army	Pither, J. R.
Army	Pither, R. G.

Class.	Name.
Army	Polden, T.
Army	Pollard, J.
Army	Porter, J. H.
Army	Porter, John.
Army	Pratt, G.
2	Purdon, S.
Army	Raymer, R.
Army	Read, W.
Army	Redman, W.
Army	Reilly, James.
Army	Reilly, J. C.
Army	Revell, N.
2	Rice, G. T.
2	Richardson, W.
Army	Rix, W.
2	Robertson, A.
Army	Robinson, Horatio.
2	Robinson, William.
1	Rogers, E. H.
2	Runcieman, A.
Army	Rutherford, R.
Army	Scarlett, T. H.
Army	Scholvein, G.
Army	Sessford, J. R.
Army	Shannon, W.
Army	Shaw, G.
Army	Sheffield, Thos.
Army	Shields, J.
Army	Ship, S.
2	Shipman, E.
Army	Short, T.
Army	Smears, J. A.
Army	Smith, T. W.
Army	Souter, W.
Army	Spiller, T.
Army	Spong, G.
1	Stanton, C.
1	Stapley, R. C.
Army	Stevenson, W. C. C.
Army	Stewart, J. W.
Army	Stubbs, W. H.
2	Tapsell, J.
Army	Taylor, R.
1	Thacker, W.
Army	Thane, J.
1	Thompson, A. A.
Army	Thomson, J. F.
Army	Venn, G.
Army	Venner, H.
Army	Walters, R.
2	Walker, T.
Army	Ward, F. K.
Army	Waters, R.
Army	Weller, W.
Army	Wells, J.
Army	Wheeler, W.
Army	Whitaker, F.
Army	White, B.
Army	Wicks, T.
Army	Willsher, J.
Army	Wilson, Alfred.
Army	Wilson, Chas. M.
Army	Wilson, Chas. S.
Army	Wilson, William.
Army	Winter, W.
Army	Wonnacott, W.
Army	Wright, C.
Army	Wroughton, J.
Army	Young, G.

App. I.
No. 2.

Appendix I.—No. 2.

List of Schoolmasters appointed by the Government of India.

Class.	Name.	Class.	Name.
1	Braide, William.	3	Hart, Charles.
3	Branagan, William.	3	Haynes, F. L.
2	Clifford, William W.	4	Houlihan, James.
4	Clancey, Lawrence.	1	Keily, John.
3	Douglas, James L.	3	Kenny, Michael.
2	Eldridge, James F.	3	Lalor, Joseph A.
3	Eaglesome, George.	3	M'Pherson, George.
3	Fitzgerald, John.	4	Mortimer, Charles.
4	Fitzgerald, Charles J.	3	Pardy, Thomas.
4	Farrell, Robert C.	3	Rees, John.
3	Ginn, Henry P.	2	Sherwood, T. C.
3	Gilmore, Charles.	3	Sealy, James.
3	Gibbs, William.	3	Smith, Henry W.
4	Gainher, James.	4	Sherwood, A. C.
4	Green, John.	2	Wolfe, Alfred.

App. II.
No. 1.

Appendix II.—No. 1.

From Lieut.-Colonel Gleig, Royal Artillery, Assistant Inspector of Army Schools for South Britain.

Sir, Ashtead, 31st January 1867.

In accordance with the instructions for assistant inspectors of army schools I have the honour to submit the following report for the information of the Council of Military Education.

The statistics of attainments and progress already furnished during the past year by superintending schoolmasters and by myself embrace all the information of that kind which I have to offer, except in reference to the examinations for school certificates. Upon the subject of these I append a return showing the number of candidates examined by me during the past year, and the number of successful candidates in the several regiments and corps in which the examinations were held. I am in a position to furnish the Council with a return of the number of unsuccessful candidates in each regiment and corps if they desire it.

The practical suggestions which I ventured to make in my last annual report—at greater length than I could have wished—have been so recently made public, that I have had no opportunity of observing whether I was justified in supposing that they might prove useful to schoolmasters and others interested in the army schools, and occupying positions of authority or influence in reference to them. But there is one point of a thoroughly practical character to which I adverted in my report last year, of which I feel bound to make mention again in presenting this report to the Council of Military Education, as indeed, I have frequently done in the course of the inspections which I have made during the past year to the schoolmasters and to others. The examination returns still show, by the results embodied in Table I., that the classification of pupils according to the system established in 1864 is not carried into effect as thoroughly as it might be. No doubt something must be allowed for nervousness in the pupils, and for accidental circumstances of various kinds, in considering the results of the examinations, especially of those conducted by the assistant inspectors and by the superintending schoolmasters; but, after making the fullest allowance on this score, I am still of opinion that the returns of attainment in Table I. of the Examination Reports indicate defects of classification in many schools. Perhaps this is the case to a greater extent in adult schools than in schools of children; but in the schools of both classes I believe that pupils of unequal attainments are instructed together in not a few instances in which this might be avoided if schoolmasters exercised due watchfulness over all their classes, or attached due importance to the principle of classification which the Council have established.

The return of men examined for school certificates compares favourably with that which I presented to the Council last year, satisfactory as I think that that was. The number of candidates examined within the last twelve months, now reported on, has been greater than during the fifteen months which were comprised in the former return, and the proportion of those examined who have been successful is also larger; and I may add that the general character of the examination papers has improved very much.

These satisfactory results are due in many instances to the direct encouragement which commanding officers have given to their men to become candidates for certficates. I think that in most of the regiments which have come under my observation the possession of a school certificate counts for something in the selection of a man for promotion, though the degree of importance attached to it of course varies very much.

In the Artillery especially, the system of making the possession of a school certificate an indispensable qualification for promotion is gaining ground, and cannot fail to exercise a sensible influence in re-establishing the ancient character of the non-commissioned officers of that corps as a well educated body of men, which circumstances quite beyond control have tended of late years to impair. Many of the examination papers which I have received from the Depôt Brigade (Artillery) School at Woolwich during the past year are really admirable; they are only equalled, but they are equalled, by those of the 1st Depôt Battalion of Infantry.

I think it would be of advantage to introduce a fourth class of certificate intermediate between the first and second. It should be called a "Superior Second Class Certificate," and should be awarded to men who qualify for first class certificate in reading, writing from dictation, and

APP. II. No. 1.

arithmetic, but who fail to qualify in two of the extra subjects enumerated on the back of the 1st class certificate. There are many candidates who fail to qualify for a 1st class certificate whose acquirements are not fairly indicated by a certificate of the 2d class. Moreover it is within my knowledge that some commanding officers require in their sergeants a more extended acquaintance with arithmetic than that indicated by the possession of a 2d class certificate, who yet do not consider that a knowledge of any of the extra subjects in which a man must pass an examination for a 1st class school certificate is necessary; and I have reason to believe that if the modification which I suggest were introduced, many of such commanding officers would make the possession of a "Superior 2d Class Certificate" a qualification for promotion, though they now unwillingly disregard the school certificate because it does not tally with the standard of attainments which they conceive to be proper for a sergeant or a pay sergeant, and in my opinion justly.

In very few regiments is a well defined standard of qualification fixed for the dismissal from school of the general body of pupils. In the case of non-commissioned officers, or of men who aspire to become such, it is usually the practice (though not universally) to require a certain amount of school instruction; and even when men are not ordered to attend the regimental school for the specific purpose of acquiring it, they are usually quite aware that attendance at the school will best afford them the means of attaining to it, and therefore place their names upon the school books and continue to attend school until they have reached the standard prescribed by their commanding officer as a qualification for promotion. But except in the case of these particular classes of men, there is not, in the great majority of corps, any rule that a soldier who joins the regimental school shall continue to attend it until he has reached a definite point of instruction. I think it is usually customary now to require of a soldier that if he places his name upon the school register he shall keep it there for one entire month at least, and shall attend the school throughout that period as often as circumstances will admit of his doing so. But in most cases a man who voluntarily places his name on the register is at perfect liberty to withdraw it after a single month's attendance, without any reference to the amount of progress which he may have made; and even in those rare cases in which men are required to attend until pronounced by the master either to have made so much progress as to be qualified to discontinue their attendance or to have attained the limit of progress for which nature has qualified them, I have never been able to ascertain that the schoolmaster has any well-defined test of the propriety of dismissing them.

It seems to me that the attainments indicated by the possession of a third-class certificate are of so very humble a character that any amount of instruction less than sufficient to enable a man to obtain one can hardly be of appreciable value; and therefore that it is almost useless for a man to attend school at all unless he continue to attend until he is able to pass such an examination as will entitle him to receive a certificate of the 3d class at least; and I am anxious to recommend to the notice of the Council of Military Education, as I have already in numerous instances recommended to that of commanding officers, the expediency of requiring that every soldier who attends school at all shall attend until he reaches this point of instruction, or is pronounced by the schoolmaster incapable of attaining to it.

It is probably unnecessary to say that I do not propose to make the possession of a 3d class certificate the test of a non-commissioned officer's fitness to be dismissed school.

There have been 23 special classes in the regiments reporting to me during the past year. In 15 of these the system was very thoroughly carried into effect, and the results were as usual excellent. In the remaining eight cases the system, as described in the circular issued some time ago by the Council of Military Education, was only imperfectly carried into effect. Nine special classes still remained in my district at the end of the year, and among them some of the 15 good ones above mentioned.

The chaplains continue to report favourably of the results of the established system of religious instruction. They have not yet all adopted the recommendation of the Council of Military Education and of the Chaplain General to take the direction of the schoolmasters' Bible lessons, and so to make the masters' teaching and their own conduce to a common object; at least they had not all done so recently. But the majority of them have, as I have before had occasion to report, and speak in the most gratifying terms of the readiness with which the schoolmasters labour to give effect to their wishes.

The conduct of both schoolmasters and schoolmistresses, as far as I have been able to learn, has been very good throughout the past year.

The superintending masters in my district deserve to be mentioned with the highest commendation.

Mr. Grant maintains at Woolwich the high character which during so many years service at Aldershot he established with persons of all ranks and classes.

Mr. Belling, who succeeded Mr. Grant at Aldershot, has proved himself equal to the duties of his laborious post. It is much to be regretted that a variety of duties connected with the school department in the camp, involving a large amount of correspondence, should interfere so much, as Mr. Belling finds that they do, with the exercise of that which I consider the most important of his functions, namely the visiting of regimental schools at uncertain periods, and reporting upon them to their respective commanding officers.

Mr. Stewart at Dover has a smaller charge than either Mr. Grant or Mr. Belling. But he performs the duties of it so conscientiously and with so much intelligence as to make me wish, in the interest of the public service, that his sphere of action were more extended, greatly as I should regret the loss of his assistance in the superintendence of my own district of inspection.

The business of examining for school certificates added to that of the periodical and occasional inspections of schools has at times imposed upon me an accumulation of work which it would have been difficult to overtake if the assistance of the superintending masters had not been invariably given with the greatest alacrity. My thanks are especially due to Mr. Grant and Mr. Belling for the aid which they have so efficiently rendered me in conducting examinations for certificates at Aldershot, often, I am sure, at the cost of no small labour to themselves.

Of the regimental reading rooms and recreation rooms I have only to repeat what I said last year, that they are admirably conducted, and that the advantages which they offer when suitably placed are fully appreciated and largely used by the troops.

I have, &c.

(Signed) A. C. GLEIG,, Lieut.-Col., R.A.,
Assistant Inspector of Army Schools.

To the Secretary,
The Council of Military Education.

APP. II.

No. 1.

Regiments and Corps in which Examinations for Certificates were held.	Number of Certificates obtained in the several Classes.			Total of Certificates obtained in all Classes.	Names of Schoolmasters by whom the Candidates were brought forward.
	1st.	2nd.	3rd.	Totals	
1st Life Guards	—	1	12	13	Pollard.
2nd „	1	6	13	20	Ransom.
1st Dragoons	—	3	16	19	Mallandaine.
3rd Hussars	3	5	14	22	Williams.
15th „	—	—	6	6	Short.
17th Lancers	—	—	3	3	Rogers.
Military Train	—	2	9	11	Belling and Greenstreet, Serg., R.A.
R. H. Art., B. Brigade	—	6	18	24	Webb.
„ C „	—	—	1	1	Hickling.
R. Art., 4th Brigade	—	2	7	9	Wicks.
„ 5th „	2	11	59	72	Gooding.
„ 8th „	—	2	9	11	Hickling.
„ 9th „	—	20	22	42	M'Kay, Serg., R.A.
„ 13th „	1	3	23	27	Cochrane.
„ Depôt Brigade—1st Division	—	1	6	7	Lowman.
2nd „	9	14	23	46	Thacker.
3rd „	2	1	11	14	Ruffle.
„ Coast Brigade	—	1	—	1	The non-commissioned officer indicated here was not attending school at the time that he presented himself for examination.
„ Special Class at Woolwich	2	2	—	4	White, Serg., R.A.
R. Engineers	—	1	29	30	Whittaker.
Grenadier Guards—1st Battalion	—	10	25	35	Richardson.
3rd „	3	4	17	24	Bird.
1/13th Foot	—	2	7	9	Macartney.
1/17th „	—	14	31	45	Colquhoun.
48th „	—	6	13	19	Polden.
52nd „	—	—	12	12	Armstrong.
63rd „	—	2	6	8	C. Bryan.
66th „	—	2	8	10	C. Fletcher.
69th „	—	—	14	14	A. M'Mahon.

Regiments and Corps in which Examinations for Certificates were held.	Number of Certificates obtained in the several Classes.			Total of Certificates obtained in all Classes.	Names of Schoolmasters by whom the Candidates were brought forward.
	1st.	2nd.	3rd.	Totals	
81st Foot	—	5	25	30	J. Burns.
89th „	1	—	8	9	Kavanagh.
1st Depôt Battalion	21	32	98	151	Runcieman.
2nd „ „	4	18	57	79	D. M'Ilherron.
3rd „ „	—	2	7	9	W. Gell.
4th „ „	—	—	9	9	Carnegie.
6th „ „	—	—	3	3	D. M'Kay.
8th „ „	1	2	12	15	Ruggles.
Commissariat Staff Corps	—	2	5	7	Davis and Jessie.
Total of Certificates of the several classes granted	50	182	638	870	
Total of Certificates refused	In all classes			389	
Total of Candidates examined	In all classes			1259	

Analysis of the above, showing the Number of Certificates in the several Classes obtained by different Ranks.

	1st Class.	2nd Class.	3rd Class.	Totals.
Non-commissioned Officers, full and acting	32	109	277	418
Privates and Gunners and Drivers	15	62	263	340
Trumpeters, Drummers, and Buglers	3	11	98	112
Totals	50	182	638	870

Note.—124 of the candidates above enumerated were examined at my periodical inspections of the schools to which they belonged. The remaining 1,135 candidates were specially examined.

A. C. Gleig.

App. II.
No. 2.

Appendix II.—No. 2.

From Lieut.-Colonel Gleig, Royal Artillery, Assistant Inspector of Army Schools for South Britain.

Sir, Ashted, 30th January 1868.

In accordance with the instructions to assistant inspectors of army schools, I have the honour to submit the following report for the information of the Council of Military Education.

In adult schools the attendance of recruits throughout the past year has been for the most part regular; that of drummers and trumpeters has also, upon the whole, been regular; that of duty men has been irregular generally; and that of non-commissioned officers has been very irregular generally.

The attendance of the non-commissioned officers of the 3d Hussars, however, has been exceptionally good.

As a matter of course the regularity or irregularity of attendance has told upon the progress of the pupils; and the progress of recruits therefore has, speaking generally, been greater than that of other adults. I do not speak of the comparative attainments of the different classes of pupils. In these the non-commissioned officers are, as a rule, superior to the recruits, and superior to what the non-commissioned officers were (at least those among them who attended school) a few years ago. I speak only of the comparative progress, as this is indicated by the examination books from time to time. Unfortunately the attendance of recruits, though it is usually regular whilst it lasts, is not usually of long continuance. And in many instances the hours of attendance are scant even for those who attend most regularly; though in this, as in many other particulars, there is considerable variety in the circumstances of different schools. Hence the limit of attainments which most recruits reach is below that which at first sight they might be expected to attain under the comparatively favourable conditions of their attendance at school.

The progress of the drummers is not generally as great as might be expected; and has, I think, been inferior of late years to what it formerly was. I am at a loss to account for this, and I think it of importance that the attention of commanding officers and of schoolmasters should be drawn to the circumstance.

The instruction given in adult schools is for the most part limited to reading, writing, writing to dictation, and arithmetic. It is but rarely that it goes beyond these elementary subjects. The time allotted for the instruction of the ordinary adult classes is so short, and the attainments of the great majority of the pupils are so limited, that few schoolmasters feel themselves in a position to give instruction in history, geography, mathematics, and other advanced subjects with advantage. Probably in all adult schools there are a few men capable of profiting by instruction in such subjects if the opportunity could be found of imparting it. But unless the staff of teachers be unusually strong as compared with the average number of pupils present, it is impossible for a schoolmaster to teach special subjects to one or two individuals in a school; and it hardly ever happens that a sufficient number of individuals capable of studying such special subjects is present at one time in a school to form a class of tolerable strength. The examinations for school certificates, in corps in which they are encouraged, have a certain effect in inducing men of superior education or abilities to read up the subjects which may qualify them to obtain first-class certificates, re-

ceiving from the schoolmaster, or from some of their more intelligent comrades, occasional assistance in their studies, carried on for the most part out of school. More than one instance of this has been brought to my notice. But the tendency within the schools appears to be more and more towards limiting the course of instruction to the rudiments of education, except in the special classes.

On the other hand, I believe that those rudiments are now more thoroughly and more systematically taught than formerly. And I think the advantage of this more than counterbalances the disadvantage of the limitation which the school course, speaking generally, has undergone. Under more favourable conditions of attendance than now exist it would of course be possible, as it is undoubtedly desirable, to extend the range of our adult school instruction without detracting from its thoroughness; but whilst the attendance of the adult pupils continues to be as irregular as it now is in so many instances, or to be limited to so short a period as it now is in others, this cannot, in my opinion, be looked for.

In the schools of elder children the attendance of those belonging to the several regiments has generally been regular; that of staff children, as usual, has in many instances been much less regular. The girls, whether belonging to regiments or to the staff, have not attended so regularly as the boys. This, to some extent, must always be the case. But when girls have leave from their commanding officers to absent themselves on particular days, and are compelled to limit their absence strictly to those days, the inconvenience to the teachers and the detriment to the school are as nothing compared to the evil effects produced by irregular and unauthorized absence. I wish that all commanding officers could be persuaded to see this, and to make arrangements accordingly.

The progress made in most of the elder children's schools has been satisfactory in reading and spelling. It has been less marked, but upon the whole not unsatisfactory, in arithmetic. In English history and grammar I think that less has been done than in former years. In geography I think not less has been done than in former years, and not unsatisfactory progress made. The attainments of the children in the three last-named subjects are, speaking generally, less than were to be found in our schools a few years back. But the reason of this is obvious. The children now attending our schools are much younger than in former years; probably because many men with families now leave the army after the completion of their first period of service. Whether the new conditions of service will produce a change in this respect, and bring back the old state of things in our schools of elder children, remains to be seen; but it is probable that, in some degree at least, it will.

There is a falling off in one very important branch of instruction; viz. handwriting, which is not attributable to the cause just mentioned except indirectly, and to which I think it very necessary to draw attention. My belief is that it arises from the circumstance of many schoolmasters making their pupils practise writing to dictation at too early an age, with a view to their being able to answer questions in writing at the periodical examinations. I should be glad if it were ordered that children under a certain age, say $9\frac{6}{12}$ or 10 years, besides writing a copy in their examination books, should be examined only vivâ voce, the examiner making a memorandum in the examination book of every such child of the results of the vivâ voce examinations, as he now does in all cases of the results of the examinations in reading. Under such a system vivâ voce spelling would naturally take the place of writing to dictation.

App. II. No. 2.

In infant schools the attendance generally has been regular; though in these, as in others, less regular on the part of staff children than on that of children belonging to the several regiments.

The registers are still not properly kept in some instances, which have been reported to the Council of Military Education as they have come under my observation. It has been represented to me by some schoolmasters, that there is great inconvenience in numbering the different ranks of adults separately. I see no good purpose to be served by it; and I should much prefer, for my own part, to have the pupils numbered from one upwards, without reference to their rank. It would be as easy as at present to arrange the names of sergeants, corporals, and other ranks upon different pages of the registers, if it were considered necessary to do so.

But as long as the existing regulations continue to be in force, on this and every other point connected with the manner of keeping the registers, it is of importance, greater than some schoolmasters and schoolmistresses seem to believe, that they should be closely adhered to, and I desire to take this opportunity of drawing their attention to the point.

The discipline of the masters' schools generally is satisfactory. The exceptions to this, so far as my observation goes, are very few. The discipline of many infant schools also is satisfactory; though there are more exceptions to the general satisfactory condition of things in respect of these than of the masters' schools. Many schoolmistresses seem not to appreciate the fact that good discipline, which is of great importance in all schools, is every thing in an infant school, and that good discipline is not indicated by the absence of disorder which results either from terror or from listlessness in their pupils. I have had occasion to impress this upon them at my inspections, and I take this opportunity of drawing attention to it again.

I believe that the schools both of adults and of elder children are generally organized upon the principle, established three years ago, of a separate classification of the pupils for reading and for arithmetic. Some schoolmasters are more successful than others in giving effect to it. But I have only seen one school in which no attempt was made to carry the principle into effect at all. The case was reported to the Council of Military Education as soon as I became acquainted with it, as well as the curious circumstance that the schoolmaster concerned, a young one, pleaded ignorance of the established system, although he had done duty for some time in a regimental school, as second to another trained master, in a garrison in which a superintending schoolmaster is stationed.

Some schoolmasters remove men from class to class only after their periodical examinations, or after the inspections. But this is a mistake. The essential advantage of the established system of classification consists in the facility which it affords of moving pupils from class to class whenever their attainments render them fit for removal. The returns on Table I. of the half-yearly reports and the inspection reports show that the removals from one class to another are not always made as soon as they might be made with advantage, whether in an upward or a downward direction. I have frequently adverted to this at my inspections, and I am anxious now to draw attention to it again.

In 36 battalions and corps within my district special classes have been at work in the past year. This includes six such classes established within the last few weeks in the Brigade of Foot Guards, by order of the Major General commanding the Brigade. It is a great advance upon previous years. But it still happens, as I have formerly had occasion to notice, that in many regiments in which special classes are

established, the system recommended by the Council of Military Education is not carried into effect in its integrity. The more nearly that system is adhered to the better are the results obtained. Perfect regularity of attendance is the essential point of it; and very little advantage, if any, is to be looked for from a small increase in the period during which each school attendance lasts, if it be not accompanied by absolute regularity of attendance on the part of the pupils, and the opening of the school for their instruction on four days of each week at the least.

The annexed return of the results of the examinations for school certificates which have been held in my district during the past year shows a satisfactory increase in the number of candidates upon the two previous years. It is observable that a smaller number of certificates of the 1st class has been taken during the past year than during the preceding one. To some extent this may be taken as evidence of the fact already mentioned, that the course of instruction in our adult schools is more strictly limited to elementary subjects than formerly, though it is due in part to other circumstances with which the Council of Military Education are acquainted. But the number of superior certificates, if the 1st and 2d class be counted together, is somewhat in excess of the number of corresponding certificates taken in former years. And the character of the examination papers for which 2d or 3d class certificates were awarded in 1867 was very superior to that of the corresponding papers of the previous years.

It will be observed that I have given very few certificates at my inspections; and for various reasons I venture to doubt the expediency of giving certificates except after special examinations of the candidates. In the first place, it is not so easy to ensure perfect fairness on the part of those examined at the periodical inspections as on the part of candidates specially examined. Generally speaking, the men behave very well at the inspections, and give little or no trouble by attempting to copy from their neighbours; but then, as they are generally not candidates for school certificates on such occasions in my district, they have no motive for copying. In schools in which it is understood that non-commissioned officers will be exempt from further attendance if the result of their examination by the inspector be satisfactory, an arrangement which I sometimes meet with, the temptation to give or receive assistance is so strong as to require the utmost watchfulness on the part of the inspecting officer. In the next place, the assembling of all the best men, which of course the candidates for school certificates will be, for examination by an inspector, will pack the school to such an extent as to make his inspection worthless for the purpose of ascertaining its general condition. And except in rare and peculiar cases, the candidates for certificates could not be placed at the prescribed distance apart during their examination without excluding the great bulk of other pupils. I am aware that although the Council of Military Education permit, they do not order their inspectors to award certificates at their periodical examinations of schools. But, with great diffidence, I presume to think that it should be absolutely prohibited to them to do so, except upon condition of their having separate examinations of the candidates for certificates and of the other pupils, and except in those rare cases in which they are able to examine all, or almost all, the men attending school.

But though I do not approve of mixing up the examinations for certificates with the periodical inspections of schools, I think these examinations excellent in themselves, and for this reason among others, that they afford a schoolmaster the opportunity of showing what men can do who leave school before the annual inspection is made, and who would therefore not come under the observation of an inspector

App. II. No. 2.

at all, if they were not brought forward by these very examinations for certificates; and if the system were extended, and every man who joins a school were compelled to remain in it until he obtained a certificate of some class, or was pronounced by the schoolmaster to be incapable of obtaining one, the number of certificates obtained in any school within a given period, considered in conjunction with the number of pupils passing into it in the same period, would gauge most accurately the amount of useful work accomplished in it, and—due consideration being given to the frequency or infrequency of attendance —the efficiency of the teachers also. The new registers, if properly kept, would supply at any moment the necessary information as to the numbers passing through the schools. And the qualification for a 3d class certificate is really of so moderate a character, that unless a man can pass the examination for one before he leaves school, he can hardly be said to have derived any real benefit from his attendance in it. Indeed unless the great majority of those who go to our adult schools are compelled to remain in them until they reach this point of instruction, I think it open to question whether those schools are worth the labour and expense bestowed upon them.

I make no proposition, it will be observed, for the compulsory attendance at school of all soldiers, though I think that much might be said in favour of such a proposition. My suggestion is limited to this, that a soldier who goes to school at all should remain at it until he has acquired that amount of instruction which is represented by a certificate of the 3d class. It might still be left to commanding officers of corps to determine, as at present, the rules under which men should be sent to school in the first instance.

A large number of men now leave school without undergoing the examination immediately before leaving which was contemplated when the existing system of examination was introduced, and without which the examination books are not a complete record of the progress made in a school. In depôt battalions I believe it is difficult, if not impossible, to make this final examination of every man who leaves school, because drafts are sometimes ordered away from those battalions at very short notice indeed; but in ordinary battalion schools I think the cases must be more rare than schoolmasters are willing to admit of men getting quite beyond their reach before they have the opportunity of making their final examination.

Still, even when men are examined before they leave school, in strict accordance with the order upon that point, the examination books of many of them are destroyed before an inspector has an opportunity of looking at them. I have given directions to many schoolmasters not to destroy or send into store the examination books which may accumulate in their hands until after I have had an opportunity of seeing them, so long as they remain in my district; but the opposite practice is quite in accordance with the regulations, and I think it desirable that these should be altered accordingly.

If a man should take a school certificate there would be less occasion to keep the book containing his final examination papers for the perusal of an inspector than if he should not take one; for the certificate would of itself be a record, more or less accurate, of the point of instruction which he had reached, and by a very slight alteration the present certificates might be made to show exactly the limits of a man's attainments. If this alteration were made, and if the suggestion which I have offered that all school-going men should be required to take a 3d class certificate at least, unless absolutely incapable by nature of doing so, before they could be dismissed from school, the entrance examinations and the examinations for certificates would probably suffice

to meet all useful purposes, and the Council of Military Education might find it quite possible to dispense with one at least of the three general examinations now held in each school in the course of the year; and perhaps even with two out of the three. I beg leave to commend this proposal strongly to the consideration of the Council.

It is still a subject of complaint with many schoolmasters that their assistants are too frequently changed. I have referred to this subject in several former reports, and I have nothing now to add to what I have said on previous occasions. Every change of teachers entails an immediate loss of efficiency upon a school, though the degree of injury of course varies according to circumstances; therefore, in schools in which changes are very frequent there cannot be satisfactory progress. It seems doubtful whether many commanding officers have yet learnt fully to appreciate the fact; but a fact it is, nevertheless, and one deserving the attention of all who really desire the efficiency of their schools.

From the infant schoolmistresses I often receive complaints of the working of the regulation which requires the monitresses to receive instruction from the schoolmaster during an hour and a half of each day; but I am not prepared to recommend a relaxation of it. It is frequently said, that in consequence of this regulation where two monitresses are employed in a school the services of one are always lost to the schoolmistress during the forenoon. But this is a mistake; and it is usually by bad management, and not by the force of the school regulations, that the services of not more than one of two monitresses are available in an infant school at the same moment. Both monitresses, where there are two of them, should go to the masters' school for instruction at the same time, and in their absence the schoolmistress should give collective lessons. But as it is not suitable that all the collective lessons should be given successively during one hour and a half, and all the class lessons, i.e. the reading and spelling lessons, during another hour and half, the monitresses should go to and from the masters' school twice or thrice in the course of the forenoon to receive their lessons; and the masters' and mistresses' time tables should be so arranged that during the half hours in which the monitresses can be spared from the infant schoolroom, the particular subjects of study suited to them should be taught in the masters' school. In numerous instances it will be found that there is no difficulty in managing this which it is not quite worth while to encounter. Of course when the masters' and mistresses' schools are at such a distance from each other that serious loss of time would be incurred in these frequent journeys of the monitresses between the two, the plan now described is not applicable; but in a large number of cases it is easy of application, and will be found to possess great advantages.

I am anxious to impress upon schoolmasters, and upon the mistresses who have charge of grown girls' schools, the advantage of setting home lessons to be learnt both by the ordinary pupils and by the monitresses. The practice exists to some extent, but by no means universally. I should be glad to see it established by authority as part of our regular school system.

It is the more necessary from the circumstance, already mentioned in this report, that the average age of the children attending our schools is becoming every year lower, and that the schoolmaster has, therefore, a much shorter period than formerly in which to effect what he can in the education of the soldiers' children. It is on this account of greater importance than ever that no means which may conduce to his success should be neglected, and among these means I believe the judicious employment of home lessons to be not the least effective. They should not be too severe. They should be chosen carefully and upon

App. II. No. 2.

a system; and the preparation of them by the pupils should be strictly enforced.

I omitted to refer in an earlier part of this report to the practice which exists of allowing pupils to work their sums upon slates at all examinations, and to copy their work from the slates to their books or papers. Both at my periodical inspections and at the examinations for certificates I have found that many errors are made in the process of copying. It is evident that there must be considerable loss of time, and I do not think the habit of making a rough copy, as it were, upon a slate, instead of working at once upon paper, is a good preparation for the practical business of keeping accounts. At one of my latest inspections I made the first classes of the schools which were under examination do their arithmetic at once in their examination books, and both the superior quickness and the superior degree of accuracy with which the work was done fully justified the experiment. The practice appears to me to be either useless or injurious, and I should be glad to see it abolished by authority.

The chaplains generally report in favourable terms of the results of the schoolmasters' teaching in their particular department, and of the working of the established system of religious instruction in our schools. I remember only one instance in which a chaplain expressed himself not fully satisfied; and in that particular case no wilful neglect was attributed to a schoolmaster, although some want of success was justly complained of.

The chaplains do not yet all of them exercise the authority conferred upon them by the school regulations in respect of the bible lessons of the schoolmasters. But most of them do so.

The conduct of the schoolmasters and schoolmistresses generally has been satisfactory during the past year. The few exceptional cases of misconduct which have come to my knowledge have been duly reported to the Council of Military Education.

The good conduct and assiduity of the superintending masters have been, as usual, exemplary. I regret that the work imposed upon them is so unequal. Mr. Belling certainly has as much upon his hands as even his energy can accomplish, whilst Mr. Stewart might well do more than falls to his share; and it is the more desirable that a larger share of duty should fall upon Mr. Stewart because he is in every respect so well qualified, as well as so willing to perform it. Of Mr. Grant I have only to report, that he continues to perform his duties as conscientiously and as judiciously as he has always done. I cannot speak too highly of the cheerful zeal with which all three of the gentlemen whom I have named have assisted me in conducting the examinations for certificates. In this, as in other respects, the heaviest labour has fallen upon Mr. Belling, and I am happy in having the opportunity of reporting to the Council the efficient manner in which he has performed it.

The regimental recreation rooms continue to be generally very attractive to the men, and to be well managed. But there are still, as the Council of Military Education know, some stations at which the accommodation is very insufficient; and without ample accommodation in the barracks the advantages of recreation rooms cannot be properly developed. I have nothing to add to what I have said in former reports upon the excellent effects of these establishments, when properly managed, upon the comfort, and therefore upon the conduct, of the troops.

I have, &c.

(Signed) A. C. Gleig, Lieut.-Col., R.A.,
Assistant Inspector of Army Schools.

To the Secretary,
The Council of Military Education.

TABLE showing the NUMBER of SCHOOL CERTIFICATES of the several CLASSES obtained in different REGIMENTS between January 1867 and January 1868.

APP. II. No. 2.

Regiments and Corps.	Class. 1st.	Class. 2nd.	Class. 3rd.	Total of Certificates.	Names of Schoolmasters.
1st Life Guards	—	4	5	9	Pollard.
2nd „	—	2	22	24	Ransom.
5th Dragoon Guards	2	2	12	16	Perkins.
Cavalry Depôt	—	—	18	18	Bolus.
B. Brigade, R.H.A.	—	2	14	16	Stanton.
C. „ „	1	—	5	6	Hickling.
5th Brigade, R.A.	3	10	26	39	Gooding.
8th „ „	—	5	4	9	M'Kay, Sergt., R.A.
9th „ „	—	9	18	27	M'Kay, Sergt., R.A.
13th „ „	—	28	114	142	Cochrane.
17th „ „	—	—	15	15	Bacon.
Depôt Brigade, R.A.—					
1st Division	—	12	22	34	Lowman.
2nd „	6	33	44	83	Thacker.
3rd „	—	6	24	30	Ruffle.
R.A., Shoeburyness	—	5	2	7	Abbott, Sergt., R A.
3rd Battalion, Grenad. Gds.	—	5	21	26	Bird.
1st „ S. F. Gds.	—	2	9	11	Thomson.
2nd „ „	—	—	12	12	Chambers.
40th Foot	—	2	12	14	M'Mahon.
44th „	—	2	7	9	White.
51st „	—	—	13	13	Stewart.
54th „	—	—	16	16	Bell.
56th „	—	—	11	11	Lacey.
68th „	—	—	8	8	Bass.
72nd „	—	—	4	4	Fowler.
1st Depôt Battalion	15	92	135	242	Runcieman.
2nd „ „	1	1	54	56	M'Ilherron.
6th „ „	—	1	9	10	M'Kay.
10th „ „	—	6	39	45	M'Ewen.
12th „ „	—	3	18	21	Giles.
Commissariat Staff Corps	—	—	12	12	M'Lean.
Military Store Staff Corps	2	6	24	32	Thacker.
Total	30	238	749	1017	
Total of unsuccessful Candidates	In all classes			619	
Total of Candidates examined	In all classes			1636	

App. II. No. 2.

TABLE showing the NUMBER of CERTIFICATES of different CLASSES obtained by different Ranks.

Class of Certificate.	Non-commissioned Officers, full and acting.	Privates, Gunners, and Drivers.	Drummers, Trumpeters, &c.
1st - - - -	16	9	5
2nd - - -	143	75	20
3rd - - -	343	320	86
Total - -	502	404	111
Grand Total -	1,017		

Note.—35 of the above received certificates at my periodical examinations; the remaining 1,601 candidates were specially examined at their own request.

A. C. GLEIG.

App. II. No. 3.

APPENDIX II.—No. 3.

FROM J. P. SARGEAUNT, Esq., Assistant Inspector of Army Schools for NORTH BRITAIN.

SIR, Tewkesbury Park, 15th June 1867.

I have the honour to forward my annual report of the schools in the districts under my inspection for the year ending 31st December 1866.

I regret that I have not been able to complete it sooner and hope the Council of Military Education have not been put to inconvenience on account of the delay.

I have, &c.
JAMES P. SARGEAUNT,
Assistant Inspector of Army Schools.

The Secretary to the
Council of Military Education.

SIR, Tewkesbury Park, Gloucestershire, 1867.

I have the honour to forward for the information of the Council of Military Education my report of the schools under my inspection for the year ending 31st Dscember 1866.

SOUTH-WEST DISTRICT.

At the time of my inspection of the schools in this district several of the adult schools at Portsmouth were either unformed or not fully developed.

In the 62nd regiment I found the adult school attended by drummers only. This regiment was stationed at Fort Grange, where the school accommodation is not sufficient for the head quarters of a regiment.

In the 56th regiment there was no adult attendance on the day of my visit. I understood that this arose from the regiment being in course of preparation for the inspection of the General commanding the district. In the 12th brigade of Royal Artillery I found the schools in good order. The special class was working well, and although during the month in which I made my inspection its numbers were somewhat decreased, there was every reason to be satisfied with its condition.

In the 54th regiment there was no adult attendance on the day of my visit, in fact the adults had not regularly commenced to attend. In three visits made subsequently by Mr. Kirk, (1) on 23rd August, no adults were present at the regular hour on account of the regiment being on parade preparing for the General's inspection, on the second occasion 27 were present, and on the third 21. The grown children's school of this regiment I found to be composed of very few children and these generally backward.

In the 43rd light infantry no adult school had been established at the time of my visit; it was in course of formation. The school materials for the use of the regiment had arrived only on the Saturday previous. Since then the school has been thoroughly organized, and has been reported by Mr. Kirk to be in a satisfactory condition.

In the 68th regiment I found no adult school. Subsequently, however, a special class has been established, and a fair report has been made of the working of the school.

In the 6th brigade of Royal Artillery I found everything in good order. A well regulated special class, an excellent children's school, in fact everything that came to my notice reflected credit on the master.

At Parkhurst I found the adult attendance irregular, and no special class; in other respects the schools were in fair working order.

At the Royal Victoria Hospital at Netley everything was in good order; the schoolmaster and schoolmistress both working with zeal, and performing all their duties satisfactorily.

All probationers for the hospital staff corps are ordered to attend school for three months unless they can sooner obtain a third-class certificate.

The schools in Scotland were in fair condition at the time of my visit. Those of the 72nd regiment were in fair working order. The schoolmaster was with the regiment during the whole period of its service in India. He appears to have been very useful to the men under his instruction in qualifying some of them for military and civil appointments requiring educated men, which appointments they obtained. There was no special class at the time of my visit. A regimental order was issued on 21st November 1866 substituting the certificates issued by the Council in lieu of those previously in use in the regiment. It is arranged that a non-commissioned officer must be in possession of a third-class certificate before he is qualified for the rank of sergeant, and that any non-commissioned officer in possession of a second-class certificate may be exempt from attendance at school.

These arrangements seem to be good; they would, however, have been perhaps better if a second-class certificate had been made the qualification for promotion to the rank of sergeant; they are at the same time worthy of imitation in those regiments in which some similar plan has not been already adopted.

I found the schools of the 4th Hussars at Piershill in fair working order. The attendance of the ordinary classes of adults was desultory, the members of the special class were more regular in their attendance. This class, however, ought not properly to be called special, as it meets only once daily for one hour, and the attendance of some of the men composing it is not regular; but if it be regarded as an ordinary class it presents a satisfactory appearance.

App. II. No. 3.

The schools of the Royal Artillery at Leith Fort labour under the great disadvantage of inadequate school accommodation. The adult attendance is not regular and that of the infants irregular. The assembling of the grown children under the master and of the infants under the mistress in the same small room is bad for both schools; they mutually impede each other.

The schools at Aberdeen are as good as can be expected. Insufficient school accommodation and the frequent drafting of men for the service companies of their respective regiments are impediments in the way of systematic instruction; under the difficulties against which the schoolmaster has to contend the schools are highly creditable to him.

The schools of the 63rd regiment at Glasgow appear to be in fair condition. The adult school was well filled at my visit, and the men appeared to be under good discipline.

The adult school of the 1/17th regiment at Plymouth was not at the time of my visit well and regularly attended by non-commissioned officers and duty men. The attendance of recruits and drummers was more regular. A special class is in operation which makes satisfactory progress.

In the schools of the 7th brigade of Royal Artillery the adult attendance has improved since last year. The grown children's school is in excellent condition. The master performs his duties with industry, zeal, and ability.

The schools of the 65th regiment were in a fair state. A special class was at the time of inspection about to be formed of 2 men per company. The schools of the 80th regiment were not at the time of my inspection in a prosperous state. The head quarters of the regiment being in a fort in which the school accommodation is limited, and the regiment having lately returned from foreign service, and, if I have not been misinformed, with considerable savings to spend, were circumstances operating against the welfare of the schools.

The schools of the depôt battalion at Pembroke Dock were in a good state. A special class has been established, but the attendance has not been so regular as to warrant the class being properly called special. The commanding officer of the battalion gives encouragement to the schools, and the arrangements he has made are of a character to advance the education of the men under his command.

The schools of the 8th Hussars at Birmingham laboured under the disadvantage of being held temporarily in a barrack room during the rebuilding of the school-room. The mixture of grown children and infants acted badly for both schools. The grown children's school of the depôt battalion at Sheffield I found to be in a satisfactory condition. The infant school presented a confused mass; no order, no discipline could be maintained in a room so small as that used for an infant school-room; it also was defective in not having proper furniture for an infant school.

The adult school was over crowded with recruits. More men were assembled than could be controlled by one schoolmaster. The recruit element vastly predominated, and thus a difficulty was created for the teacher. Men untrained or only partially trained to military habits are not so amenable to discipline as formed soldiers; hence if a school be composed principally of recruits its numbers should be more limited than if it were composed of trained soldiers, in order to be within the control of the master. Considering the difficulties I think the master managed the school very well.

The schools of the depôt battalion at Preston were all in fair working order. The schoolmaster continues to give satisfaction to his commanding officer, who has requested me to bring him again to the notice of the Council and to recommend him for promotion, and in doing so I may

say that if the Council should have an opportunity of giving Schoolmaster Earp superintending rank it would be a proper promotion to make. I annex a schedule showing the number of school certificates I have recommended to be granted in the districts under my inspection. There can be no doubt that the examinations for these certificates ought to act as a stimulus to the schools, whether they have at present had a marked effect it is premature to say. If, however, it be taken for granted that these examinations have already had a good influence, it is a question whether it will last unless the possession of a certificate confer some material advantage on the possessor. I am inclined to think it will not. It is not usual to find men exerting themselves for no apparent advantage. The love of knowledge does not inspire the ignorant. Men are apt to argue that the trouble and risk of an examination are to be avoided unless a good result should present a near prospect of promotion or of some other benefit. Offer advance of pay, promotion, or any reward that you will to the possessors of certificates, and you will at once secure permanence for your system. On the other hand, give certificates which have no more value than the card on which they are printed, and you will starve the scheme till it ultimately die of atrophy.

I would submit for the consideration of the Council that it is desirable to make the qualifications for a third-class certificate rather higher by requiring a knowledge of the tables of weights and measures as well as of the money table, and that the paper for this class should consist of not less than 12 questions in arithmetic; for example—

Question 1. Addition or subtraction of money.
2. Addition of weights or measures.
3. Multiplication of money.
4. Multiplication of weights and measures.
5. Division of money.
6. Division of weights and measures.
7. Reduction of money.
8. Reduction of weights or measures.
9. How many shillings, &c., are there in guineas, &c.?
10. How many ounces Troy are there in pounds Troy?
11. How many ounces are there in tons Avoirdupois?
12. How many feet are there in miles?

If a third-class certificate is considered a sufficient qualification for promotion to the rank of sergeant, a paper on this basis is not too difficult.

I would also suggest that the paper in arithmetic for each class should be self contained, that is to say that the 1st and 2nd classes should not work the same elementary questions as the 3rd class. This would give a little more trouble to those who set the papers, but it would prevent any misunderstanding on the part of the candidates as to what questions they are expected to work.

It would be an excellent plan if every candidate could have a printed paper of questions given to him when he takes his seat at the examination table. This would prevent the necessity of any questions being asked in the course of the examination, and it would ensure the sums set being accurately copied down by the candidates. The cost of printing would be very insignificant provided that it could be arranged for all the examinations in my district being held simultaneously and the same papers being sent to officers commanding regiments for candidates. Supposing two days in the year were fixed on which to hold exami-

App. II. No. 3.

nations, say 20th May and 20th November, then by each commanding officer forwarding a month previous to those days the number of candidates for each class offering themselves for examination the Inspectors would be enabled to have a sufficient number of papers printed and forwarded to each regiment according to the number of candidates.

As an examiner I should prefer the questions on regimental accounts forming a separate paper, and that the mess account questions should be set according to some general form and not according to the various methods adopted by different regiments. It would be simpler to adopt a general form which, if not in every little detail applicable to every regiment, might be such as to ensure any man being able to carry it out, being able at the same time to work any similar form. I quite agree with the Council in thinking that the standards are as low as they can be made to be of value to the holders. I will not argue as to the desirability or otherwise of insisting upon a knowledge of regimental accounts as essential to a second-class certificate. Schoolmasters are generally instructing men in these subjects and the difficulty that has hitherto been felt in these questions is gradually being overcome. I see considerable difficulty in granting certificates at the annual examinations as suggested by Mr. Vicars. It would be difficult to adhere to the scheme provided. Even though men might pass in harder questions inequalities would gradually arise in awarding certificates at an examination not expressly held for that purpose. The annual examinations themselves are already sufficiently complicated without being embarrassed with the addition proposed. The plan already laid down by the Council has this great advantage, that if it be strictly carried out no injustice can arise. If it should be thought desirable to alter the plan of the papers as I propose I would ask that the instructions for examiners should be as definite as they are at present.

I would now beg to call attention to the difficulty frequently experienced in obtaining assistants qualified for the duties of teachers. In some regiments the assistants are appointed for short uncertain periods, and as soon as the assistance becomes valuable to the school it is withdrawn. In other cases soldiers are appointed for this duty without any apparent reason, it may be they are inferior soldiers, in which case it is quite a lottery whether or not they are any use in the school. It is desirable then that some fixed plan should be adopted throughout the army as to the appointment of soldier assistants. To ensure their qualifications being sufficient it should be provided that none be employed who have not obtained first or second class certificates. I would also suggest that none should be appointed for a less period than twelve months. During this period their own education should be improved by receiving instruction from the schoolmaster for at least one hour daily, not in the regular school hours. Each class in a school should have its separate teacher, and as it is desirable to subdivide classes into numbers not less than 20 and more than 30 I would suggest that the present regulation be altered to this extent; that is, that one assistant be allowed to every class comprised of from 20 to 30 adults, on condition of regularity of attendance of the classes; this alteration would be very beneficial. The first condition indeed of a school's success must be regularity of attendance on the part of the pupils. That this regularity does not at present exist cannot be doubted. It is the one thing wanting which is complained of in all reports on the schools. Lieut.-Colonel Gleig says, "Irregularity of "attendance is the main cause of so many adults having made little "or no progress." Mr. Vicars in alluding to the same subject says, "It is much to be regretted however that the average daily attendance "continues to bear so unsatisfactory a proportion to the number on the

"school books," and again, "These returns show at a glance that in "the majority of cases the time occupied in the school-room by the "adult is so limited as to preclude the prospect of substantial progress."

Again, Colonel Maude says, "The general attendance of the adults, "those of the special classes excepted, has been irregular, the average "attendance of each adult being under two or three times a month."

Colonel Romer makes a similar report. Here then we have a concurrence of testimony which is indisputable and which is confirmed by the Council when they state that "the remedy for this irregularity con- "tinues to be anxiously sought for by the Council." The plans that I have suggested, and which do not appear to have met with approval, were not offered because I had any special claim to infallibility in this difficult subject, but in the hope that, though they might not be the best, some more practicable and feasible plan might be offered by those who look upon any suggestion as impracticable. I will not now endeavour to point out any new way to the desired end. I sincerely hope the Council may have found what has been wanted now for nearly half a generation, a remedy for the evil. I would only suggest that whatever that remedy may be unless it be enforced by general order, and not merely recommended, it is likely to be as ineffective as other schemes which are left for individual acceptance and not laid down as a general rule for the guidance of all.

If the acceptance of the present system of musketry instruction had been left to the discretion of commanding officers of regiments there can be very little doubt that it would not even now have been generally adopted throughout the army. Such has been the case as regards the recommendation for the establishment of special classes. They are not generally adopted throughout the army, and I fear they will not be universally adopted until they are enforced by regulation, and the absence of a member of a special class from school be regarded as severely as absence from parade.

If indeed it should ever become a part of the system to order all men to school until they had been taught up to a fixed standard, the plan might be defended on the ground that the army itself would be improved by having reduced the number of ignorant men in its ranks and thus having attained to a higher standard of intelligence for all purposes for which an army is required. And if it be granted that the army itself would be improved by increased education, and at the same time the individuals composing it be personally benefited, it is worth some sacrifice of opinion and of long cherished views on voluntary attendance to gain this end.

I am frequently seeing in the performance of my duties regiments just returned from India, and it happens in some cases that the men of these regiments have considerable sums of money to their credit in the regimental savings bank. Since the adoption of the scheme of school certificates it has struck me that we aim at teaching men the way to keep their savings bank account without in any way teaching them to keep their savings. It not unfrequently happens that a regiment having a large sum of money to the credit of its soldiers on return from foreign service is partially demoralized so long as the money lasts. I must beg indulgence for touching on a subject which is perhaps not strictly my duty to notice, but the teaching bank accounts and the teaching men a wise disposition of their funds are subiects so nearly allied that I must make this my apology for noticing it. It is indeed a great misfortune that men acting under the excitement of a recent return home should in a few days of impulse throw away the advantages of their previous savings. Whilst the excitement lasts the discipline of

App. II. No. 3.

the regiment suffers, and when it is over the men have the uncomfortable reflection that for a few hours of very questionable enjoyment they have squandered their savings and rendered vain the prospect of an addition to their means on retiring from the service. It might be difficult, and at first it might be unpopular with soldiers for Government to interfere in this matter, but when it became thoroughly understood that the interference was entirely for the benefit of the men and in no way for the benefit of the Government it would be regarded with satisfaction.

An objection might be taken on the ground of right, that in this as in all other dealings on the part of the Government "laissez faire should "be the general practice," and that "every departure from it unless "required by some great good is a certain evil." A departure from the principle being right in this case may be shown from the same author, when he says, "A second exception to the doctrine that individuals are "the best judges of their own interest is when an individual attempts "to decide irrevocably now what will be best for his interest at some "future and distant time. The presumption in favour of individual "judgment is only legitimate where the judgment is grounded on "actual and especially on present personal experience, not where it is "formed antecedently to experience and not suffered to be reversed "even after experience has condemned it."

The case of a soldier squandering under extraordinary circumstances of excitement that money which the thoughtfulness of the Government has enabled him to save for his future benefit strongly calls for wise interference. He gratifies a momentary impulse. What was intended for his benefit he turns to bad account. The machinery provided in the hope of raising him morally and materially too often demoralizes him. Is then the object to do evil or to do good to the soldier? If forsooth it be to do him good, and that it is so none can doubt, there can be no injustice in taking care that the object be really accomplished.

How such an object can be most advantageously carried out it is difficult to decide. A well arranged benefit society from which soldiers might either receive annuities on retirement or fixed sums might perhaps supply the defect.

It is not, however, my intention, if I had the power, to elaborate a scheme. It would require the co-operation of those with whom I am not in communication. It is my wish simply to point out the evil, and if the means of saving for the future be secured to soldiers and added to the many advantages they already possess, that most difficult problem of how to recruit the army would be rendered less difficult and the real good of soldiers more frequently obtained.

Having taken the liberty of diverging for a moment from the subject of schools I wish shortly to point out the result that the examinations for certificates shows as to the education of the soldiers. It appears from the returns published by the Council that 80·75 per cent. of those who offered themselves as candidates for certificates failed to obtain a higher certificate than a third-class; that is, they displayed a knowledge of arithmetic not higher than addition, multiplication, division, and reduction of money, or, to be more precise, 43·75 per cent. obtained only third-class certificates, whilst 37 per cent. failed to attain even to this very modest standard. I presume that in an educational point of view the candidates were the elite of their regiments, or at any rate of the regimental schools.

Here then we have another proof of the inefficiency of the adult education.

The account I gave of the schools of the 7th brigade of Royal Artillery has led the commanding officer to look upon my statement

as inaccurate. I admit that it is, so as far as it says that it accounts for the best attendance to "27th July last." The 27th of July was the day of my inspection, and I took into account only the six months immediately preceding my visit. It would therefore have been more strictly correct if I had said that it was the account for the six months ending 30th June 1866. My account then represents the six months immediately preceding my inspection on 27th July, and whilst to this extent I admit the inaccuracy I must claim for my argument the same force. That the total number of attendances of 4 men for six months should amount to 57, or an average of 14·25 per man, *i.e.* 2·36 per man per month, and that these 4 men were the best attendants for that period, would lead me to the conclusion that an adult school of that character does not require the services of a trained master. What benefit could his instruction have been in such a school for these six months? I attach no blame either to commanding officer or the schoolmaster. The latter is a most painstaking zealous teacher, and I have every reason to believe that the commanding officer looks with favour upon the schools. The point for which I contend is simply that when a brigade or regiment is so situated as to render an adult school useless from the irregularity of attendance the time of a schoolmaster is wasted and had better be employed elsewhere.

I have thought it right to make this correction in my annual report to give the Council an opportunity, if they think fit, of making my correction of the error as public as the error itself.

It remains now for me only to express my satisfaction at the general good conduct of the army schoolmasters who have come under my notice during the past year. Their efficiency is shown in the general condition of the grown children's schools, and their good conduct in the absence of complaints from their commanding officers.

The infant schools are generally in a satisfactory state, the children are drafted from the mistress as soon as they are able to take advantage of the teaching of the master's school. This tends to keep low the standard of infant schools, but they must not on this account be regarded as less useful. I believe the schoolmistresses as a body are performing their duties to the best of their ability.

It remains for me now only to bear testimony to the work of the superintending schoolmasters. Mr. Kirk has the largest district and perhaps the most difficult one from the constant change that has at times taken place. He is of very great use in organizing and keeping schools up to their work. It would be good for him to have a complete set of school materials which he could lend to any regiment coming home and being quartered at Portsmouth until a regular supply could be obtained from the War Office. If he had been in possession of a set last year he would have been able to have established schools for the 43rd light infantry some considerable time earlier than was the case owing to a delay having occurred in the supply from the War Office.

I have, &c.
James P. Sargeaunt,
Assistant Inspector of Army Schools.

The Secretary to the
Council of Military Education.

App. II. No. 3.

	Sergeants.			Corporals, A. Corporals, Bombardiers, A. Bombardiers.			Privates, Gunners, &c.			Total.	Failures.	Grand Total.
	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.			
31st Regiment	1	4	—	1	—	—	—	—	—	6	6	12
87th „	2	—	3	5	2	12	—	—	12	36	130	166
43rd „	1	2	5	3	1	6	—	1	1	20	23	43
1st Royal Dragoons	—	1	—	—	—	3	1	—	13	18	5	23
Royal Artillery	—	2	6	3	29	38	—	3	5	16	26	112
7th Depôt Battalion	—	—	—	—	—	3	—	—	—	3	2	5
9th „ „	1	2	2	2	3	3	—	1	5	19	6	25
	5	11	16	14	35	65	1	5	36	188	198	386

James P. Sargeaunt.

App. II No. 4.

Appendix II.—No. 4.

From J. P. Sargeaunt, Esq., Assistant Inspector of Army Schools for North Britain.

Sir, Tewkesbury Park, 31st January 1868.

I have the honour to forward for the information of the Council of Military Education my general annual report of the schools in the military districts under my inspection for the year 1867.

The adult schools are generally attended so irregularly that little progress can be made in them.

Special classes are rare in name, and do not exist in reality.

In one regiment a class which was called special was composed of men whose average attendance was a little more than three hours weekly. In another battalion the men of the special class were sent some for one month, and some for six months.

In another composed of 13 men, and which had been in operation one month, the total attendances for the month amounted to 38, or an average of rather less than three attendances per man. These classes have not, as far as my knowledge extends, been accepted by commanding officers.

If they had been generally adopted in the manner proposed by the Council, allowing three or four hours instruction daily to the pupils, there can be no question but that excellent results would have followed.

The ordinary classes of the adult schools are generally attended very irregularly. It is necessary in most schools to confine the instruction to the most elementary subjects. It is impossible for a schoolmaster to

make much impression on his pupils even in these subjects. The attendance of recruits in some depôt battalions, where it has been made compulsory, is rather better than in regiments. But this leads to overcrowding the school with men unused to military life, frequently ignorant of the rudiments of an education, and requiring more attention individually than can possibly be devoted by the schoolmaster during the one short school hour. No beneficial results can be expected from this plan.

The grown children's schools are generally in a more satisfactory condition. Such schools as the grown children's at Aberdeen of the 6th Brigade of Artillery are fit to be compared with any schools of their character. The Bible lessons are generally fairly given by the masters. The individual lessons I have heard given in my presence have been generally good; they do not, however, appear always to be lessons in a course. The best and most systematic course of religious instruction that has come under my notice is conducted by Schoolmaster Brown in the school of the 6th Brigade of Royal Artillery. He has prepared his own syllabus, by means of which he takes his pupils through a regular course of lessons, carefully prepared out of his school hours, and assisted if necessary, by reference to his note book. In some instances the chaplains have taken advantage of the power given them in the school regulations of directing the schoolmasters as to the weekly Bible lessons. The Epistle and Gospel for the Sunday have been selected as the basis of Bible lessons. I am afraid this selection is not calculated to teach children a competent knowledge of scripture. These portions of scripture are in themselves instructive excerpta from the Bible, and are used in our church service with excellent effect; but they are not so likely to impart religious knowledge as a methodical and consecutive study of the Gospel narrative. Children should be made to learn the life of Christ from its earliest stages to its close. They should have each scene presented to their minds in its proper order. They would thus acquire from the teaching of a good master a practical and efficient knowledge of the foundation of the Christian religion.

Bible lessons.

But unless masters have already prepared for themselves some definite scheme, such as that of Mr. Brown, which must have cost him many hours labour, I am inclined to think they have not time to prepare a daily lesson of nearly half an hour's duration which is likely to be profitable to their pupils. It would, in my opinion, be desirable to omit the Bible lessons on the two mornings in the week allotted to the religious instruction of the chaplains, and that on the other four mornings masters should be directed to follow the course of some authorized syllabus.

The reading of the grown children is generally good in the higher classes. In schools which I inspected, and did not examine, I had an opportunity of seeing the lessons given. The masters generally give satisfactory lessons. They cannot, however, be too often reminded that in order to give the best possible lessons they should themselves always read beforehand the lesson they propose to give, and this preparation is even more necessary for the school assistants.

Reading.

There is an improvement in the dictation lessons. Children have acquired the habit of writing words dictated once. In my examinations I have given the punctuations, but I think that this assistance would be better omitted. It would be necessary always to give the pupils the full stops, but the minor punctuations might be fairly expected from them.

Dictation.

Composition is not sufficiently attended to. The practice of letter writing, and of writing answers to questions in history, geography, and

Composition.

App. II. No. 4.

scripture, might profitably be more used. There can be no better exercise for pupils than the reproduction of their knowledge in a concise and correct form on paper, and no more certain test of the intelligence of the examined could be afforded to an examiner.

Writing.

That excellent penmanship which was at one time the mark of regimental schools is not so frequently met with now; the writing is, however, generally fair. Schoolmasters generally are anxious to begin teaching the children to write from dictation as early as possible. This is an exercise which is rather detrimental to formal copy writing. In the present system of judging schools by standards, it is necessary to prepare children as early as possible, and I do not think that any loss will be sustained if the schools do not produce such excellence of penmanship, provided the standard of dictation be raised.

Arithmetic.

Arithmetic is generally taught with satisfactory results. The standards do not necessarily show that each pupil can work, or rather has worked accurately the standard recorded. The instructions given in form B. direct that "A pupil is to be classed under any standard when he does "fairly any portion of the work denoted by that standard." I would suggest that it would be a better arrangement if pupils were obliged to work accurately at least half the questions in the standard, and to show that they knew the principles of working all the questions in it, in order to pass in it.

Grammar.

The knowledge of grammar in most of the schools is confined to the parsing of a simple sentence. I am inclined to prefer teaching a grammatical knowledge of the English language, without the use of grammar to all but the 1st classes of the schools. It is better to acquire a grammatical habit of writing without the aid of the rules of grammar, which young children seldom understand. Analysis is a most useful exercise for children reading in standard A. Schoolmasters would do well to pay more attention to this subject.

Geography.

Geography is a subject fairly taught throughout the schools. A knowledge of it is confined generally to the 1st classes of children. Collective lessons have in several instances been given to the lower classes, but the knowledge thus imparted does not produce much effect at a written examination.

Higher subjects.

In a few cases algebra has been taught to boys. At Preston one boy can work as far as quadratic equations.

Infant schools.

In the infant schools there has been a satisfactory amount of work performed. The instruction in these schools is necessarily collective to a great extent. Where the schoolrooms are large enough to admit of the infants marching, and where they are suitably furnished for their purpose, their efficiency has been invariably good.

Schoolmasters and Schoolmistresses.

The schoolmasters have been reported as of good character and efficient. I have had no serious complaints of any one master during the year. Commanding officers have generally spoken highly of their masters and mistresses, and I have every reason to believe that they have performed their duties satisfactorily.

I have, &c.
(Signed) James P. Sargeaunt,
Assistant Inspector of Army Schools.

The Secretary,
Council of Military Education.

App. II.
No. 4.

Corps.	Sergeants.			Corporals, &c.			Privates, &c.			Total.	Failures.	Grand Total.
	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.			
Royal Artillery	1	6	1	1	6	7	2	5	18	39	15	54
63rd Regiment	—	1	1	—	—	—	—	2	5	9	7	16
72nd „	—	—	1	—	6	11	2	3	9	32	5	37
80th „	—	1	1	—	3	1	—	7	6	19	8	27
1/20th „	—	—	—	—	—	2	—	—	6	8	11	19
40th „	—	1	2	1	—	—	—	1	8	13	8	21
97th „	—	1	3	—	1	1	—	1	1	8	11	19
7th Depôt Battalion	—	—	—	—	—	1	3	—	10	14	6	20
15th Depôt Battalion	—	—	—	1	—	—	7	13	39	60	25	85
	1	10	9	3	16	23	14	32	94	202	96	298

JAMES P. SARGEAUNT.

APPENDIX II.—No. 5.

App. II.
No. 5.

From E. A. VICARS, Esq., Assistant Inspector of Army Schools for IRELAND.

SIR, Rugby, February 1867.

I have the honour to forward my annual report of the condition, progress, and prospects of the schools in my district for the year ending the 31st December 1866.

The unfavourable circumstances to which I referred in my last report as having affected injuriously the working of military schools in Ireland during the year 1865 have unfortunately recurred to a considerable extent during the year 1866. Although there has not been a renewal of the interruption of school operations occasioned by a general election and the consequent dispersion of the troops in aid of the civil power, yet the precautions which were taken to provide against and arrest any revival of the Fenian movement by the location of troops in towns and villages where their presence was considered necessary for the restoration of public confidence involved as a natural consequence a material reduction in the strength of regiments at their head quarters and removed from the range of their educational machinery a large number of adults, and children for whom it would otherwise have been available.

Dispersion of troops in connexion with the Fenian movement.

The disadvantages of this breaking up of regiments into small bodies as regards the working of their schools have been happily counteracted in an appreciable degree by the establishment of detachment schools wherever occasion and opportunity offered. Substantial good has no doubt been effected by their instrumentality, for although the soldier in charge may not and cannot be expected to have the skill in teaching

Detachment schools and their uses.

App. II. No. 5.

or knowledge of system possessed by the trained master, he has probably had some experience as an assistant, and if he is able in the majority of cases to do little more than prevent his pupils from forgetting what they have learnt something considerable has been gained.

It is, however, much to be desired that the exceptional circumstances which have caused this dispersion of the troops over a much larger area than has of late years been thought necessary will speedily pass away.

The disadvantages in an educational point of view of regiments being broken up into small bodies.

I have frequently observed that the corps which return from foreign service in the least satisfactory condition as regards their schools are those which have been divided and detached at out stations, where, even if any attempt of a practical character could be made to give instruction, the ordinary military duties generally render the attendance both small and irregular, and there cannot I think be any doubt that in a general way the breaking up of regiments into small bodies acts prejudicially in an educational point of view. The companies which remain at head quarters have less time and leisure at their disposal in consequence of the decrease in the strength of the garrison, and those which are at out-posts are often thought to be so temporarily separated from the head quarters as to render it unnecessary to provide for their instruction in school. So long, therefore, as the regiments stationed in Ireland, and more especially those located in the southern districts, have to be employed in active military duty they will be under a serious disadvantage in respect to their power of applying and profiting by our school system.

Pursuing the course which I have hitherto adopted I shall now proceed to lay before the Council such statistics as appear to me to throw light upon the condition of the schools in my district, and to illustrate their progress and prospects.

Reasons for selecting October instead of December 1866 for the calculations given.

I have hitherto made the month of December the basis of my calculations, both as regards the number on the school books and the average daily attendance, but as during that month the Fenian movement was revived, it would not be a fair period to select for making the estimate, the disturbing causes before referred to having returned, and if possible in an aggravated form; I have, therefore, selected the October monthly school reports as the groundwork of my analysis, and the following are the results.

Number of men on school books for October 1866.

The total on the school books for October 1666 was 3,979, thus composed:

Sergeants	302
Corporals and lance corporals	692
Privates	2,704
Drummers	281

Number of men for December 1865.

The return for December 1865 was 3,682, thus made up:

Sergeants	307
Corporals and lance corporals	698
Privates	2,317
Drummers	360

Comparing these figures with those for 1866 it will be observed that there is little if any variation as regards either the sergeants or corporals. There is, however, an increase in the number of privates of 297 and a decrease in the number of drummers of 79.

Average daily attendance for October 1866.

The average daily attendance for this same month was 1,478, viz.:

Sergeants and corporals	215
Privates	1,085
Drummers	178

so that of the aggregate on the registers the per-centage of attendance was—

For sergeants and corporals	22 per cent.
„ privates	38 „
„ drummers	62 „

For 1865 it was—

Percentage of number on the school books for December 1865.

Sergeants	19½ „
Corporals	20 „
Privates	40 „
Drummers	59 „

Upon the whole the per-centage has been maintained without any very material variation, but this is no doubt to be ascribed in a great measure to the increase of the force in Ireland since 1865.

There is one particular in which in my judgment the information furnished by the monthly school reports is incomplete. There are no means of ascertaining the number of hours spent by each man in school during the week. Formerly there was a column provided for supplying those facts, and they were of great use in testing the character of the ordinary adult attendance. That attendance is often merely nominal; many men go to school not more than twice a month, some even less than that, and the majority it is to be feared in many cases not more than once a week. Substantial results cannot of course be expected to flow from instruction given in so desultory a form. The men, especially those who belong to the lower classes, cannot afford to have these breaks and intervals in their teaching; it must be regularly sustained if it is to be effective.

The omission of the figures in the monthly school reports which show the number of hours per man per week, and reasons for restoring them.

In another respect too these figures were valuable, inasmuch they also served to show to what extent the "special class" system in such regiments as had adopted it was carried out in its integrity, and grouped together for comparison and contrast the figures which illustrate the merits of the two systems. I would therefore beg to recommend that these returns be restored to the face of the monthly school reports.

The figures in question illustrative also of the relative value of the special class system.

The disturbing influences before commented upon have of course operated to the prejudice of the "special classes" in my district. There were not more than four in operation in October 1866 out of the entire force in Ireland. This startling decrease is, I believe, principally if not altogether attributable to the difficulties with which commanding officers have had to contend in providing for the exigencies of a crisis. In two or three regiments, in which hitherto the system had never been tried, an attempt was made to organize a class at my suggestion; but after a short time it had to be abandoned, in consequence of the heaviness of the duty and the small number left at head quarters available for its discharge. In others these classes have been reduced in size and efficiency or altogether given up.

The special classes affected injuriously by the exceptional dispersion of the troops.

Such opportunities, however, as I have had during the past year of observing the working of the classes satisfy me that it is the best expedient which has yet been devised for instructing the soldier, and that if it can only command a fair trial and reasonable opportunities for success, its results will be most advantageous to the educational status of the army. It is, I believe, a question whether this system, or one analogous to it in spirit and design, might not be allowed to serve as a substitute for what is known as the "ordinary attendance" of adults in those regiments where it was found to be practicable to adopt it in its entirety, and where dispensing with the usual afternoon school for adults might be a convenience to commanding officers as regards parades and other military duties, and where such an arrangement seemed in other respects to be likely to facilitate the operation of the

Suggestions as to the substitution in certain cases of the special for the ordinary adult attendance.

App. II. No. 5.

special classes. If the two systems can be maintained together efficiently there would obviously be no ground for disturbing them. The "ordinary attendance" is very useful as an auxiliary to the "special" attendance, but it is not equivalent for it. The former might fairly be allowed to be somewhat desultory and uncertain if the latter was a matter of course and part and parcel of regimental administration.

Number of men examined in 1866 and their classification as to attainments.

I find that I have figures showing the examination in the course of the past year of 2,083 adults. These were either examined by myself or by a superintending schoolmaster.

As to reading, dictation, and arithmetic the 2,083 adults may thus be classified:

Reading.

A.	436	or 20 per cent.
B.	470	or 22 „
C.	391	or 18 „
D.	351	or 16 „
Above	118	or 5 per cent.
Below	317	or 15 „

Dictation.

A.	280	or 13 „
B.	293	or 14 „
C.	378	or 18 „
D.	389	or 18 „
Above	58	or 2 „
Below	685	or 32 „

Arithmetic.

A.	139	or 6 „
B.	210	or 10 „
C.	245	or 11 „
D.	292	or 14 „
E.	335	or 16 „
Above	21	or 1 „
Below	335	or 40 „

Tables of progress.

The returns as to progress in the last two subjects and in writing are as follows:

Dictation.

Great progress	120
Progress	820
Stationary	668
Gone back	24

Writing.

Great progress	76
Progress	990
Stationary	544
Gone back	22

Arithmetic.

Great progress	113
Progress	858
Stationary	617
Gone back	44

It will be observed that this total of 1,632 falls short of the number examined by 451, which represent the men examined for the first time and for whom progress is not marked.

App. II.

No. 5.

There would appear to be good grounds for anticipating that certificates of education are becoming more an object of acquisition in my district than they have heretofore been. In my judgment the power given to assistant Inspectors in the last report of the Council of Education to recommend any man for a certificate who at their annual inspection appeared qualified in either class will have a tendency to popularize the examinations, and to attach to the certificates of education a greater value and significance, inasmuch as they will be awarded as a recognition of merit and on a public occasion, which as it only recurs at considerable intervals is invested with official importance and thereby attracts more attention and interest than can be expected to belong to a special examination held in the absence of the Inspector.

Increasing popularity of certificates of education, and the probable effects of their being awarded at the visit of the inspector and after a public examination by him.

The children's schools in my district are upon the whole in a satisfactory condition. They have not escaped the evil effects of the exceptional distribution of the troops in Ireland, but they have experienced them in a milder form.

The number of grown children and infants on the books and the average daily attendance in October 1866 were respectively 1,728 and 1,456, viz.—

Grown children's schools and infant.

Grown Children.

	On Books.	Average daily Attendance.
Boys	383	319
Girls	330	246

Number on books and average daily attendance.

Infants.

Boys	506	434
Girls	509	457

In December 1865 the returns were—

Number on Books	1,685
Average daily attendance	1,487

That is, the total on the registers was less than that in 1866 by 43, and the average daily attendance was greater by 31.

If I am correct in my calculations there have been 636 grown children examined in the course of last year as against 467 in 1865. The following is the classification as to attainments :

Number of grown children examined.

Their classification.

Reading.

A.	86
B.	125
C.	165
D.	150
Above	22
Below	88

Dictation.

A.	68
B.	73
C.	100
D.	141
Above	16
Below	238

App. II.

No. 5.

Arithmetic.

A.	40	
B.	57	
C.	68	
D.	85	
E.	150	
Above		16
Below		220

Tables of progress.

The tables of progress may thus stand—

Dictation.

Great progress	62
Progress	330
Stationary	163
Gone back	1

Writing.

Great progress	85
Progress	402
Stationary	65
Gone back	4

Arithmetic.

Great progress	92
Progress	376
Stationary	88
Gone back	0

Eighty children were examined for the first time and they are not included in the above tables.

Infant schools and schoolmistresses.

The infant schools in my district have been efficiently conducted during the last year. With one or two exceptions I have not met with a schoolmistress who in my judgment was wanting in the requisite qualifications for her position, although of course there are some whose capacity, manner, and knowledge of system render them more successful than others. Where so many very young children form portion of her charge the schoolmistress needs to be more than a mere teacher. If she is to keep order she needs that sort of firmness and appreciation of discipline which are not inconsistent with gentleness, kindness, and the power of amusing. I have seen single women who seemed to understand the act of managing very young children, but as a rule the gift belongs to those who have themselves been mothers. I think, therefore, that wherever it is practicable single women should be attached, at all events at the commencement of their career, to garrison schools which are always under the superintendence of schoolmistresses of some standing and experience, from whom they may generally learn a great deal that they cannot otherwise acquire.

Single women at first best employed in garrison schools under schoolmistresses of standing and experience.

Singing.

The improvement in singing in my district is not as marked and decided as I should wish to see. The best I have met with for a considerable period is in the children's school of the 92nd Highlanders which in this respect as in others is quite a model for imitation.

Industrial schools.

The industrial school system seems to work satisfactorily. The materials purchased are suitable and the manner in which they are made up is on the whole creditable. Mrs. Shipman of the 92nd Highlanders deserves conspicuous mention and high commendation for the work exhibited by her on the occasion of my last visit, and which the Council have already had an opportunity of inspecting.

I have to report in favourable terms of the schoolmasters and schoolmistresses in my district in respect to conduct and character. Taken as a whole they are a most respectable body.

Conduct and character of the schoolmasters and schoolmistresses in my district.

The library system continues to be popular and successful. The papers, periodicals, and books purchased are chosen with taste and discrimination. Publications of an objectionable character, either in religion or politics, are not to be found in the reading rooms with which I am acquainted.

Libraries and reading rooms.

The accommodation provided as yet for recreation rooms falls far short of what is requisite; wherever it is sufficient for the wants of a regiment, both as to size, lighting, furniture, &c., the seats are well filled during a greater portion of the day and the games in great demand.

Recreation rooms.

The lectures delivered by the various schoolmasters, especially at those stations which receive the magic lantern and slides in their turn, appear to have lost none of their attraction. They have been generally attended by large audiences, though, as might naturally be expected, some subjects and some lecturers command more interest than others.

Lectures.

Military schools, libraries, reading and recreation rooms, and lectures rightly viewed, will be regarded as forming parts of one great system designed to civilize and domesticate the soldier, to win him from what is low and degrading, and to attach him to all that is pure and elevating and of good report.

The design and purpose of military schools, &c.

I have, &c.
(Signed) Edwd. A. Vicars.

To the Secretary,
Council of Military Education.

Regiments or Corps in which Examinations for Certificates were held during 1866.	Number of Certificates obtained in the several classes.			Total Certificates obtained in all Classes.
	1st.	2nd.	3rd.	
3rd Foot 2nd Battalion - - -	—	17	6	23
4th Dragoon Guards - - -	—	15	4	19
6th „ - - - -	12	24	9	45
74th Regiment - - -	1	3	4	8
92nd Highlanders - - -	7	23	14	44
Total of Certificates of several Classes - -	20	82	37	139
Total of unsuccessful Candidates - - -	14			
Total examined - -	153			

App. II. No. 5

TABLE showing the NUMBER of CERTIFICATES in the several CLASSES obtained by different RANKS.

Class of Certificate.	Non-commissioned Officers, full and acting.	Privates, Gunners, and Drivers.	Trumpeters, Buglers, and Drummers.
1st - - -	6	13	1
2nd - -	47	34	1
3rd - - -	18	19	—
Total - -	71	66	2
Grand Total -		139	

Note.—Of the 14 unsuccessful Candidates 7 were non-commissioned officers.

Rugby, July 1867. EDWARD A. VICARS.

App. II. No. 6.

APPENDIX II.—No. 6.

From E. A. VICARS, Esq., Assistant Inspector of Army Schools for IRELAND.

SIR, Rugby, 24th April 1868.

I have the honour to forward herewith my report of the schools, libraries, recreation rooms, &c. &c. in my district for the year ending the 31st December 1867.

The past year, like the two which preceded it, has not been favourable to school operations in Ireland. The ordinary difficulties which lie in the way of a regular adult attendance in the army have been supplemented and aggravated by the exceptional circumstances which have characterized this period. As I anticipated, it was found necessary in the interests of order to distribute the troops over a much more extensive area than has been customary in modern times. A large proportion of the regiments have been called upon to garrison outlying towns and villages, and the strength consequently of regiments at head quarters has been most materially reduced. Whenever indeed it has been practicable detachment schools have been opened, but although they are of unquestionable utility as a provisional arrangement, they cannot be expected to work as efficiently as those which are under the more immediate supervision of the commanding officer, and have the benefit of the tuition of trained masters. The disadvantages and inconvenience do not end here. The number of men at head quarters being considerably diminished the duties have become more onerous, and to a great extent precluded anything like a regular attendance of adults at school. The system of special classes has been almost entirely suspended in my district in consequence of the circumstances mentioned. In several instances Colonels have made more than one attempt to reorganize them, but have been compelled to abandon them in the face of the many obstacles with which they had to contend.

Dispersion of the troops unfavourable to adult education.

The "special class" system almost abandoned in consequence of the pressure of military duty.

It is indeed only reasonable to expect, that in proportion as the ordinary avocations of his profession are made more numerous and more burdensome the soldier should have less time, opportunity, and taste for educational improvement. Whenever it can be done, it is most desirable that attendance at school should be regarded by the adult, not as a labour additional to, but a substitute for, other duties of which he is temporarily and in part relieved.

Colonel Daniell's proposal.

In my inspection report of the 28th Regiment I brought under the consideration of the Council the proposal of Colonel Daniell, that a certain number of men in each company should be struck off the duty strength of each regiment, in the same manner as is done in reference to the staff, and that these men should form the adult school of each corps. Should any such arrangement be found to be practicable there can be little question of its expediency. It is, in point of fact, an amplification and extension of the idea of "special classes," a system which I regard as the sheet anchor of adult education in the army. Colonels of regiments who are really interested in the instruction of their men, and especially in having a body of non-commissioned officers of adequate educational attainments, are not satisfied with the results of what is known as the ordinary adult attendance. In many corps the recruits are marched to school, but as regards the remainder of those who are on the school books the attendance is, for the most part, of a very irregular and promiscuous character, limited in very many cases to one hour, rarely exceeding two hours a week, and often not amounting to one hour per month. It is no wonder if under such circumstances the progress is often merely nominal and commanding officers look in vain for the fruits of the schoolmasters' labours.

Irregularity of the attendance.

Instead of the register being loaded with a large number of names of non-commissioned officers and men, the majority of whom have no intention or prospect of attending with any thing like regularity — instead of the schoolroom being crowded at intervals with classes unwieldy in size, and too numerous to admit of careful teaching — the thing to be desired in my judgment is, that those who are on the roll shall be men who have time, opportunity, and inclination to avail themselves of the instruction within their reach, and that their numbers shall be such as to render them easy of control and discipline, and capable of a close and thorough supervision. It might safely be affirmed that an active and intelligent schoolmaster would do more with a special class of 30 men in the course of three months, provided always that the attendance was enforced with as much strictness as it is in the case of the "grown children," than he could hope to do with four times that number in 12 months.

A small school of regular attendants more likely to be successful than a large one, where the instruction is given only at intervals and to large classes.

The last three years, however, may fairly be regarded as an exceptional period, and it may reasonably be hoped that the difficulties and hindrances which have charactised it with respect to military education will not recur in the same form or to the same extent in the future.

The period an exceptional one.

I find that the number of men of all ranks on the school books in December 1867 were 3,636, thus composed:

Number on school books and average daily attendance for December 1867 and October 1866 in the several ranks.

Sergeants	171
Corporals	582
Privates	2,604
Drummers	279

The number for October 1866, was 3,979 made up of:

Sergeants	302
Corporals	692
Privates	2,704
Drummers	281

App. II. No. 6.

The average daily attendance for December 1867 was 1,090, consisting of—

Sergeants	19
Corporals	94
Privates	821
Drummers	158

For the purposes of comparison, I reproduce the figures for 1866; viz.:—

Sergeants and Corporals	215
Privates	1,085
Drummers	178
Making a total of	1,478

The average daily attendance in December 1867 of those on the school books was of —

Percentages of those on the books who were present on the daily average.

Sergeants	11 per cent.
Corporals	16 „
Privates	35 „
Drummers	56 „

The figures for October 1866, are —

Sergeants and Corporals	22 per cent.
Privates	38 „
Drummers	62 „

I find that the number of men in my district examined during the past year, was 1,774, as against 2,083 in 1866.

Classification in standards.

As to reading, dictation, and arithmetic, the 1,774 adults may be thus classified :—

Reading.

A.	408	
B.	375	
C.	315	
D.	276	
Over		115
Under		285

Dictation.

A.	211	
B.	257	
C.	294	
D.	330	
Over		37
Under		645

Arithmetic.

A.	98	
B.	208	
C.	218	
D.	267	
E.	292	
Over		17
Under		674

In round numbers 35 per cent. of these men belong to standard A. and above A. as to reading, 13 per cent. to A. and above A. as to dictation, and 6 per cent. to A. and above A. as to arithmetic. The

other side of the picture shows that 31 per cent. are in D. or below D. as to reading, 54 per cent. in D. and below D. as to dictation, and 53 per cent. in E. and below E. as to arithmetic. Those below the standard are in reading 16 per cent., in dictation 36 per cent., and in arithmetic 38 per cent. Percentages as to standards.

The returns as to "progress" are as follows: Progress tables.

Dictation.

Great progress	98
Progress	881
Stationary	721
Gone back	36

Writing.

Great progress	102
Progress	1,064
Stationary	590
Gone back	12

Arithmetic.

Great progress	191
Progress	920
Stationary	580
Gone back	40

As regards school certificates of education, I am glad to be able to report a very considerable increase in the number issued in my district. I believe that this result is mainly due to connecting the grant of certificates, in a general way, with the visit of the Inspector. The following figures will speak for themselves. Certificates granted for the year 1867:— School certificates.

1st Class.

Sergeants	16
Corporals	17
Privates	34
Drummers	12
Total	79

2d Class.

Sergeants	23
Corporals	76
Privates	52
Drummers	24
Total	175

3d Class.

Sergeants	8
Corporals	57
Privates	140
Drummers	14
Total	219

App. II.

No. 6.

Summary.

Sergeants	47
Corporals	150
Privates	226
Drummers	50
Grand Total	473

The number refused was as follows :—

Sergeants	0
Corporals	8
Privates	40
Drummers	4
Total	52

Thus it will be seen that the number of men who obtained certificates in 1867 was 473, as against 82 in 1865.

Children's schools.

The children's schools in my district are for the most part in a satisfactory condition. They too have suffered appreciably by the dispersion of troops in connexion with the Fenian disturbances.

Statistics as to children on the register and average daily attendance.

The number of grown children and infants on the books for December 1867 was 1,634, thus composed :—

Grown Children.

Boys	360
Girls	309

Infants.

Boys	486
Girls	479
Total of both schools	1,634

The average daily attendance for that month was 1,203; viz. 506 boys, and 697 girls, showing that 76 per cent. of the boys attended on the daily average, and 70 per cent. of the girls.

The return for 1866 was :—

Number on school books	1,728
Average daily attendance	1,456

that is, of boys 84 per cent., and of girls 83 per cent.

Classification.

The number of grown children examined in 1867 was 550, whose attainments may thus be classified :—

Reading.

A.	63	
B.	111	
C.	130	
D.	119	
Over		34
Under		93

Dictation.

A.	56
B.	58
C.	79
D.	116
Over	16
Under	219

Arithmetic.

A.	35
B.	31
C.	64
D.	66
E.	99
Over	19
Under	221

Percentage.

These figures give the following percentages :—

Reading.

D. and below D. - - - 38 per cent.

Dictation.

D. and below D. - - - 60 per cent.

Arithmetic.

E. and below E. - - - 58 per cent.

For 1866, the percentages were :—

Reading.

D. and below D. - - - 37 per cent.

Dictation.

D. and below D. - - - 59 per cent.

Arithmetic.

E. and below E. - - - 58 per cent.

which is almost identical with the return for 1867.

Progress tables.

The figures as to progress are :—

Dictation.

Great progress	73
Progress	274
Stationary	156
Gone back	5

Writing.

Great progress	78
Progress	370
Stationary	57
Gone back	3

App. II.

No. 6.

Arithmetic.

Great progress	80
Progress	333
Stationary	85
Gone back	10

Upon an analysis of these figures, it will be found that of the number of children examined 68 per cent. have made great progress or progress in dictation, 88 per cent. in writing, and 81 per cent. in arithmetic. This is a very satisfactory result.

Infant schools.

The infant schools in my district have been well conducted during the past year, and are in a satisfactory condition. Generally speaking the discipline is good, and the children appear happy and contented. Where so many are little more than babies, it is not an easy matter to maintain order and regularity, and yet avoid the appearance of severity and unkindness; it requires tact and patience, combined with good temper and firmness. It will be seen, from the figures already given, that the average daily attendance of infants for December 1867 was 72 per cent. of the number on the school books.

Singing.

I cannot report any decided or general improvement in the singing. Some few of the masters and mistresses in my district appear to have a taste for music, and the capacity of teaching it; but many are almost entirely destitute of the gift of ear and voice, and consequently, although they may be industrious enough in their attempts to instruct in singing, their success, as might be expected, is of a very slender character.

Industrial schools.

The industrial school system appears to work satisfactory. The materials vary very considerably in kind and quality, but upon the whole the money allowed appears to be expended with judgment and care.

Character and conduct of schoolmasters and schoolmistresses.

The character and conduct of the schoolmasters and schoolmistresses in my district during the past year deserve every commendation. They vary, of course, in ability, and in the art of teaching, but as a class their attainments are commensurate with the position they occupy, and their moral behaviour such as to entitle them to respect and confidence.

Libraries, &c.

The library system works successfully. The committees who select the books, periodicals, and papers appear to discharge their duty with discrimination and intelligence; and, as I have had the pleasure of recording in previous reports, publications of an objectionable character, either morally or politically, are excluded from the reading rooms.

Accommodation deficient.

The accommodation for libraries, reading, and recreation rooms falls, as yet, far short of what is desirable and sufficient; but there has been some improvement in this respect, which it is to be hoped will be progressive until the deficiency is fully supplied.

I have, &c.
(Signed) Edw. A. Vicars.

To the Secretary,
The Council of Military Education.

Regiments or Corps in which Examinations for Certificates were held from 1st January 1867 to 1st January 1868.	Number of the Certificates obtained in the several classes.			Total Certificates obtained in all the Classes.
	1st.	2nd.	3rd.	
1st R. Dragoons	—	6	10	16
4th Dragoon Guards	—	5	4	9
6th „	37	24	48	109
10th Hussars	—	—	8	8
Military Train	—	—	1	1
12th Lancers	3	16	20	39
17th Foot 1st Battalion	—	3	4	7
21st Foot „	5	—	—	5
39th Foot „	23	10	10	43
48th Foot „	9	40	40	89
59th Foot „	2	6	13	21
68th Foot „	—	4	3	7
71st H. L. Infantry	—	26	20	46
74th Highlanders	—	4	4	8
92nd „	9	14	3	26
Royal Artillery	1	29	43	73
Total of Certificates of the several Classes	89	187	23	1,507
Total of unsuccessful Candidates		51		51
Total of Candidates examined		558		558

TABLE showing the NUMBER of CERTIFICATES in the several CLASSES obtained by different RANKS.

Class of Certificate.	Non-commissioned Officers, full and acting.	Privates, Gunners, and Drivers.	Trumpeters, Buglers, and Drummers.
1st	35	41	13
2nd	101	61	25
3rd	67	149	15
Total	203	251	53
Grand Total		507	

Remarks.—51 men were disqualified, viz., 8 corporals, 39 privates, and 4 drummers.

EDWARD A. VICARS.

App. II.
No. 7.

Appendix II.—No. 7.

Annual Report on the Army Schools at Gibraltar, by Colonel Smith.

Sir, Gibraltar, 28th February 1867.

In compliance with paragraph 20 of the instructions for local Inspectors of Army Schools dated 1st October 1864, I have the honour to lay before the Council of Education the following report of the schools, libraries, and reading rooms at this station.

I would in the first instance beg to remark that I only arrived at Gibraltar in the end of November last year, consequently my knowledge of the localities in the garrison is rather limited.

Royal Artillery.
Royal Engineers.
2d Batt. 15th Regt.
32d Regiment.
78th "
86th "
87th "

The several corps as per margin now compose this garrison, the schools of which I inspected this month, and have forwarded the usual reports in accordance with the regulations.

Attendance of Adults.

The general attendance of the adults, those of the special classes excepted, has been regular, the average attendance of each adult being about three or four times a month. I would here beg to state that some commanding officers of regiments reported to me that they had lately informed their non-commissioned officers and privates that they would from henceforth take into consideration the claims of those men in the possession of certificates regarding their promotion; consequently in two regiments the number of candidates was large, and indeed I may add that the candidates for certificates throughout the corps in garrison were numerous.

At present the several regiments in the garrison are much below their strength, while the duties furnished by the men remain the same; consequently the men have fewer nights in bed and are in other ways prevented from attending school.

Special classes.

Special classes are established in all the corps in garrison; in some the attendance is very fair and the progress made very satisfactory, especially in the Royal Artillery.

Attendance of children.

The children have generally attended most regularly, and the progress has been fair.

Commanding officers.

Commanding officers generally render a fair support to the schools in every way.

Schoolmasters.

I can make a very fair report as regards schoolmasters; some are more energetic than others, and have a different and better system. I would beg to bring to the notice of the Council Schoolmaster Stubbs, Royal Artillery, an exceedingly good man in all respects. All the commanding officers reported favourably of their schoolmasters, and were satisfied with them. They reported them as being respectful, keeping up a proper position, and having a good manner with the men.

Schoolmistresses.

The schoolmistresses give general satisfaction throughout the several corps to which they are attached.

Schoolrooms.

The Royal Artillery infant school consisting of 60 children is still held in that very faulty and inadequate place reported upon by my predecessor. In the hot weather it is very unadvisable to have the children in it on account of their health.

With the exception of the Royal Artillery and Royal Engineer school, the school room accommodation throughout the garrison is very fair.

A new schoolroom for the Royal Artillery has already been commenced by the Royal Engineer Department.

The 86th regiment in the Casemate Barrack have a remarkably good schoolroom, airy and well fitted up.

The schoolroom of the 32nd regiment at Buena Vista is also very good; but as regards fittings it is defective, the maps are too small, very inconvenient for large classes, and the desks are in two rows, a system in my opinion very objectionable; as a large class becomes spread out so as to be nearly uncontrollable by one man; the three rows are far preferable.

Infant schools.

The following accommodation is much required in this garrison:—An infant schoolroom for the regiment quartered in the Town range barracks, one for the regiment at Casemate Barracks, and also one for the regiment at Windmill Hill Barracks.

Libraries.

I do not agree in opinion with my predecessor, that it would be better to amalgamate the two libraries, north and south. There would be great difficulty in finding a suitable site, the books would become liable to much ill usage in being carried such long distances from the garrison library to the different corps.

Reading and recreation rooms.

The Royal Artillery and Royal Engineers have each a reading room, comfortable and well conducted; the Royal Artillery room requires more light. The only infantry regiment which has a proper recreation room is the 86th regiment in Casemate Barracks; it is large and airy, well situated and attractive, and always crowded; it is well managed; plenty of games, newspapers, coffee, &c. at all hours for the men, and it is in very creditable order.

All the other regiments have barrack rooms fitted up as recreation rooms, and they are made as attractive and as comfortable as circumstances will allow.

The schoolmasters appear to carry out all the instructions of the Council. The attendance at the lectures has been reported to me as very good.

In conclusion I would beg to report very favourably of all the schoolmasters in this garrison, who, from my short experience here, appear to me to be very zealous, painstaking men, and I would beg to bring to the notice of the Council more especially the name of Schoolmaster Stubbs, Royal Artillery.

I have, &c.

(Signed) Hugh Smith, Colonel,
Local Inspector of Schools.

To the Secretary,
Council of Military Education.

APP. II. No. 7.

REPORT of EXAMINATION for CERTIFICATES by Colonel SMITH.

Regiments and Corps in which Examinations for Certificates were held from December 1865 to March 1867.	Number of Certificates gained in the several Classes.			Total Certificates gained in all Classes.
	1st.	2nd.	3rd.	
Royal Artillery	1	—	—	1
Royal Engineers	—	—	—	—
2nd Battalion 15th Regiment	10	18	18	46
32nd Regiment	7	14	—	21
78th „	5	25	18	48
86th „	3	11	3	17
87th „	4	24	30	58
Totals of Certificates of the several Classes	30	92	69	191
Total of unsuccessful Candidates	Of all classes			27
Total of Candidates examined	In all classes			218

TABLE showing the NUMBER of CERTIFICATES in the several CLASSES obtained by different RANKS.

Class of Certificate.	Non-commissioned Officers, full and acting.	Privates, Gunners, and Drivers.	Trumpeters and Drummers.
1st	17	11	2
2nd	62	22	8
3rd	49	17	3
Total	128	50	13
Grand Total	191		

Note.—The whole of the above received Certificates at my periodical inspection.

Remarks.—Of 92 Certificates granted in the 2nd class, 3 of the candidates were examined for 1st class, and of the 69 3rd class 23 were examined for 2nd class.

Gibraltar, 16th March 1867. HUGH SMITH, Colonel.

Appendix II.—No. 8.

App. II.
No. 8.

Annual Report on the Army Schools at Gibraltar, by Colonel Smith.

Sir, Gibraltar, 7th March 1868.

In compliance with paragraph 20 of the instructions for Local Inspectors of Army Schools, dated 1st October 1864, I have the honour to lay before the Council of Education the following general report on the schools, libraries, and reading rooms at this station up to the 31st December last.

During the past year the following changes in corps have taken place in this garrison: the 32nd and 86th regiments have left for the Mauritius, and the 78th Highlanders for Canada, relieved by the 75th, 83rd, and 1st battalion 13th regiments; the 87th regiment has now left for Malta, relieved by the 74th regiment, and the 1st brigade Royal Artillery has left for Halifax, relieved by the 15th brigade.

My report is generally satisfactory, though there are two or three points not so on which I shall report in detail.

The general attendance of the adults has been irregular, especially the 75th regiment, whose average has been only 1½ hour per month, the others two or three times a month.

I find the same men seldom attend two consecutive examinations, therefore it is hard to form a just opinion as to individual progress in the regiment.

It is hardly necessary to remark that with such a limited attendance little progress is made. The daily average of soldiers who are to be found in the majority of schools in this garrison does not bear a proper proportion to the number who are on the school books, and the amount of time given in the case of those who do attend is so small as to render it idle to look for any substantial results.

I find the establishment of special classes is little attended to by commanding officers, although I took occasion to draw their attention to the Field Marshal Commanding in Chief's orders and instructions on that head. The guards and fatigue duties continue as heavy as at the time of my last report, and the men have little spare time to pass at school and little inclination after coming off a hard day's work in a hot sun; very many men being employed by the Royal Engineers on the new fortifications now in progress at Gibraltar.

The children have generally attended school very regularly, and their progress has been correspondingly satisfactory; the commanding officers of corps generally support their schools in every way.

With reference to the 75th regiment I regret that I am unable to report so favourably of it. There does not however seem to be any want of care on the part of Schoolmaster Arthur, who seems a very painstaking man. Colonel Gordon has consented to establish a special class, by which means the regular attendance of a certain number of men will be assured, and I trust that the results may be satisfactory. The boys are not clean or well dressed. I regret to say the infant school is not what I should like to see. I am strongly of opinion that it is for the

App. II. No. 8.

benefit of the service that the schoolmaster and mistress should be husband and wife when practicable; they would be more likely to try and assist each other, and the little petty jealousies and differences which occasionally arise would be done away with. The children were not backward, but there seemed a want of attention, and they were noisy, which I conceived to have arisen from a want of energy and strength on the part of the schoolmistress; the work in the industrial school was behindhand, but I must add that the attendance of grown girls was small, there being very few in the regiment.

I am decidedly of opinion that the mixed system of boys and girls is almost a necessity in regimental schools, and it is obvious that in this school either the grown girls or the infants would be neglected without it.

I must draw attention to an excellent system adopted by Schoolmaster Arthur, and which met with my warm approbation, a system of "home lessons." It is I conceive an admirable one, and a most useful auxiliary to the day's studies; it also serves to bring the schoolmaster into more direct communication with each child, so that all are equally under his supervision.

Religious Instruction.

All the schools open with prayer followed by a Bible lesson.

There are but two chaplains in this garrison; however they visit the schools frequently, and give such instructions to the schoolmasters as they consider essential. I have much pleasure in reporting that I have heard no chaplain speak in other than approving terms of the manner in which the schoolmasters have assisted them in carrying out this part of their duty.

Lectures.

Much exertion has been made to encourage the system of lectures. I was in hopes that commanding officers would prevail on some of their officers to give lectures, which would add much to the zest of the subject, but I regret to say they failed; the chaplains state that time will not permit them to give any, but they assist the schoolmasters in preparing their subjects. Twenty-one lectures have taken place during the winter, seven per month delivered by the schoolmasters on subjects illustrated by the magic lantern which is regularly circulated in the garrison. I have received the greatest assistance from Schoolmaster Stubbs, Royal Artillery, who displays much energy and zeal in preparing these lectures and assists me in promoting emulation amongst the schoolmasters. I do not permit any schoolmaster to lecture to his own regiment, as I think changing them from one regiment to another is likely to create more emulation and esprit de corps amongst them. I must acknowledge they are all very willing and display much interest in the subjects brought forth. Concerts and readings are occasionally got up, and in those regiments where the officers take a leading part, the lectures, &c. are well attended, and the men seem to derive much amusement from them.

Libraries and Recreation Rooms.

The libraries are in good order, and the circulation of books is large and satisfactorily carried on. I am still of opinion that two garrison

libraries are required in this garrison, and I do not concur in the measures proposed by Colonel Maude. I find on examination that a great number of subscribers content themselves with reading books which they have seen in the hands of their comrades; thus the reading is confined to certain subjects and these works are read to the exclusion of the rest. I frequently try to impress on the librarians that they should point out different works to the men, and thus try and extend their instruction; in some instances the project has met with success.

Recreation Rooms.

These important institutions have not altered since my last report. In some barracks the accommodation is much better than in others. The Engineer barracks is the only one in which it is proposed to make any alteration, and no doubt this will be well carried out when the building is finished. The officer commanding, 13th regiment, has made great exertions at Windmill Hill in establishing a good system, and every assistance has been rendered him by his Excellency the Governor, through my representations, in establishing fresh games on requisition, and opening fire places, and sundry other smaller matters. The accommodation generally in the garrison is very indifferent for recreation rooms.

In conclusion I have to report very satisfactorily of all the schoolmasters. The attendance for certificates was not so large this year as last. Care has been taken to give instruction in all the schools in ledger and banking accounts and with a favourable result.

I shall pay great attention to the adult school of the 75th regiment, and endeavour to improve it; but some use must be made of the certificates, or men will never exert themselves to try and obtain one. There is a point which I would beg respectfully to bring to the notice of the Council. In the Royal Engineers the practice is that all men previous to promotion have to undergo two examinations, one educational and the other departmental, and it is of no consequence whether the men can produce a certificate or not, as the commanding officer will not recognize it. Such is the system in the corps, consequently the sapper has no inducement to go in for a certificate, whereas if the possession of one, say first-class, exempted the sapper from the educational examination on his promotion, he would find it of value, and he would prize it. Out of 25 adults who came forward there were 7 men who could easily have obtained a first-class certificate, and on my urging them to try for it they said it was of no use to them, and they did not want it.

I have, &c.

(Signed) Hugh Smith, Colonel,
Local Inspector of Schools.

To the Secretary,
The Council of Military Education.

App. II.
No. 8.

Regiments or Corps in which Examinations for Certificates were held from December 1865 to March 1867.	Number of Certificates obtained in the several Classes.			Total Certificates obtained in all the Classes.
	1st.	2nd.	3rd.	
15th Brigade Royal Artillery -	3	—	—	3
13th Foot - - -	—	1	—	1
15th „ - - -	7	7	10	24
83rd „ - - -	—	1	—	1
87th „ - - -	—	1	2	3
Total of Certificates of the several Classes - -	10	10	12	32
Total of unsuccessful Candidates - - -		44		44
Total of Candidates examined		76		76

The above were obtained at my periodical examination.

TABLE showing the NUMBER of CERTIFICATES in the several CLASSES obtained by different RANKS.

Class of Certificate.	Non-commissioned Officers, full and acting.	Privates, Gunners, and Drivers.	Trumpeters, Buglers, and Drummers.
1st - - -	10	—	—
2nd - - -	7	2	1
3rd - - -	10	1	1
Total - -	27	3	2
Grand Total -	32		

Note.—The above were obtained at my periodical examination.

HUGH SMITH, Colonel.

Appendix II.—No. 9.

App. II. No. 9.

Report on the Army Schools at Malta, by Colonel Romer, R.A.

Sir, Malta, February 1867.

In compliance with instructions, I have the honour to transmit, for the information of the Council of Military Education, a report of the regimental schools of the following regiments; viz.

3d Brigade, R.A.
2d Battalion, 4th Regiment.
1st „ 8th „
2d „ 8th „
1st „ 22d „
24th Regiment.
29th „
84th „
1st Battalion, 60th Rifles.
Royal Malta Fencible Artillery.

Attendance of adults.

The attendance at school of adults continues to be irregular and unsatisfactory. The system adopted with regard to men's attendance, being in different regiments, in some it is compulsory for con-commissioned officers only, in others it is compulsory for all classes of men who have not attained a certain amount of education, in others again it is voluntary for all.

The compulsory system ensures the attendance of a certain number of pupils daily, but coming as some of them do "off guard," whilst others come looking upon it as a disagreeable infliction, many such attendants embarrass the schoolmaster, and make no progress, nor indeed can progress be expected. On the other hand, when the attendance is purely voluntary, it is often most irregular. Certain men will attend several times in one month, the same men during the following months will attend only once, or perhaps not at all, and although it is not to be accounted for, such men are nevertheless unwilling that their names should be taken off the school books. I doubt, however, if any man's name should be permitted to remain on the books who has not, without satisfactory reasons for his not doing so, attended at least once during the week. Without going so far as to say that I think the rule "aut disce aut discede," should be adopted in our army schools, some restriction should be imposed to prevent their being too lightly treated by the men.

Certificates of education.

During the past year 342 men have come forward for examination for "school certificates." The candidates are chiefly from the Royal Artillery, the 4th and 8th regiments, and 1st battalion 60th rifles.

9 qualified for 1st class certificates.
45 „ 2d „
145 „ 3d „

whilst 143 candidates did not succeed in obtaining any class of certificate.

Four special examinations were held in addition to my periodical inspections.

It has been with regret that I have been unable to recommend for certificates many who came forward for examination, but I have strictly observed the instructions furnished for my guidance, in conducting these examinations, and I am far from thinking the standards of education

App. II. No. 9.

required to obtain the several classes of certificates are too high. I have been obliged to reject some candidates, who would otherwise have taken 2d class certificates, in consequence of their being unable to keep "Savings Bank" accounts. As this knowledge is absolutely necessary in order to qualify for a 1st or 2d class certificate, schoolmasters should make it a part of their instruction to pupils in the senior classes.

"Special classes."

The opinions of all the school inspectors so entirely coincide with those of the Council on the subject of "special classes," that it would be superfluous for me to offer any remarks on their advantages; in order, however, to ensure results, they should be carried out according to the mode recommended by the Council.

In this command two regiments only have had "special classes," during the past year, the 1st and 2d battalions of 8th regiment; one class appears to have fallen through, the results of the other, that of the 2d battalion, 8th regiment, were as follows:

Amount of Progress.	Reading.	Dictation.	Arithmetic.
Great Progress - -	—	—	4
Progress - -	15	15	20
Stationary - - -	14	14	5
	29	29	29

Six of these men left the class at different times before its termination (three for misconduct and three at their own request). The average number of attendances of those that remained was 133·8, each attendance 1·45 hours.

Another class has been established in the same battalion, and better results are expected.

Progress of adults.

As might be expected from what I have already stated, with regard to irregularity of school attendance by adults, their progress has not been as satisfactory as is desired. I have been surprised to find instances of men who have made progress, and yet whose attendance at school has been irregular and infrequent. Upon inquiry, I understand that such men have studied in their barrack rooms; slates, books, &c. having been lent to them by the schoolmasters, and unless there is any objection to such a practice, of which I am not aware, I commend its adoption as much as possible. In the school of one regiment, however, I am able to record satisfactory progress, the 1/24th; the holding a certain certificate of education is, in this regiment, a necessary condition towards a man being considered qualified for promotion as a non-commissioned officer, and it has had its effect on the progress of the school.

Progress of grown children.

In the children's schools generally there has been satisfactory progress, and the attendance has been regular.

The infants schools have also been regularly attended, and well conducted.

School-mistresses.

The schoolmistresses bear good characters, and they appear to me generally to manage the children well, and to succeed in interesting them, and in gaining their attention. Some no doubt do so more than others.

School-masters.

The schoolmasters, with one exception, have been very favourably reported on by their commanding officers, and I have found them efficient, and conducting their duties with ability. Some masters are more energetic than others, and some have more tact in dealing with

the men. I mention this, because I am convinced that the attendance at school and the progress is more or less affected by the manner in which the men are received and treated in school. The schoolmasters may be, as indeed they are, thoroughly efficient, and perfectly well conducted, but unless they succeed in making the men feel that they are really interested in them, and desirous of helping them to master the subjects proposed to be taught them in the schools, there will not be good attendance nor satisfactory progress. App. II. No 9.

I have, &c.

(Signed) Rob. C. Romer, Colonel,
Local Inspector of A. Schools.

To the Secretary
The Council of Military Education.

Appendix II.—No. 10.

App. II. No. 10.

Report on the Army Schools at Malta, by Lieut.-Colonel R. B. McCrea, R.A.

Sir, Malta, 31st January 1868.

The period having arrived when officers connected with the education of the army are directed to give an account of their stewardships for the past year, I have the honour of submitting the subjoined observations for the consideration of the Council, noted in the transaction of my duties since I relieved Colonel Romer, R.A. of the local inspectorship on the 1st of last December.

Since that date I have either examined or inspected the whole of the schools in this command, forwarding to the Council the classified returns of the examinations; I therefore confine this report to the general principles of the system as they passed under my observation.

The first great point which struck me forcibly during these inspections (I may add long before), was the absence of life and reality, of warmth so to speak, in the working of the system. Parents send their children to school in many cases reluctantly; the mother too often active in framing excuses in keeping the elders at home for the assistance they render, and the men, weighted with continual routine duties, look upon school as irksome or unnecessary. The schoolrooms are in great part barrack-rooms substituted for the purpose; and though they are sufficient in one sense, are not in their appearance or fittings inviting. The schoolmasters are a correct excellent class of men, but as a general rule are wanting in that happy fertility of resource, that variety of tone and tact, so essential to ensure success in most things, but especially where the impression on our mental faculties is concerned. The officers, with rare exceptions, take no interest in the matter. There are no rewards or incentives to zeal; and the system being one of fixed routine, intended to mould the most sensitive of earthly things, gets treated after the fashion of our stores of imperishable material, instead of flourishing as a healthy vigorous plant, languishes in a sterile soil, and pines for better nourishment.

On looking over the reports of my predecessor, I find that, like myself, he has urged upon commanding officers the advantage of forming special classes of young men in order to qualify them for the simplest requirements of the duties of the non-commissioned officer; but the answer has almost always been one of regret that, on account of the severe garrison duty, the men could not be spared; that is, released from ordinary duties for the purpose of regularly attending school.

App. II. No. 10.

This garrison duty mainly consists in mounting guard round the extensive fortifications of Malta; where, although we are happily in peace with all nations, 220 men daily are posted on sentry over the war material on the works. It is, however, not impossible but that the day will come when this large amount of sentry duty may be reduced; inasmuch as the extraordinary modifications in modern weapons will sooner or later necessitate a total change in armaments, when with fewer guns less supervision will be required. It is possible also by keeping in store all parts of the armament which can be injured or stolen, and which would delay only by a few minutes the bringing of the guns into immediate service position, this supervision may be managed less rigidly, and yet equally effectively. One of the smartest officers with whom I have ever served, Lord Alexander Russell of the Rifle Brigade, on taking over command of the Citadel and district of Quebec, reduced the garrison duties considerably, by placing married soldiers in the most unimportant guard-rooms, with proper instructions to look after the public property in their vicinity. As a general rule this property from its nature cannot either be stolen or injured, except under circumstances of a most extraordinary character; and I would submit that if this principle were extended, many of the weary hours in which a soldier paces his rounds in the fierce heat of a more than tropical summer's climate, might be devoted to his primary education, and to the making of a far more useful public servant of him. It has lately been stated that, in the last return of the Prussian army, out of 300,000 men there were only 10 who could not read. It must be yet a long day ere such a return can be rendered for our troops proportionately; collected from the richest people on earth as they are; and considering the rapid march of science, the fate of a campaign between two armies equally well armed, and under generally equal conditions, would probably be decided by the standard of the soldiers in intelligence and education.

Independently of the preventive causes arising from duty, there is, I submit, less inducement to soldiers to attend school than there might be. Mental toil is not inviting to grown up labouring men. Government offer no prizes or rewards for qualification here, as they do for proficiency in musquetry or for good conduct. I am not aware if it has ever been proposed that an increase of pay should be given to men qualifying for certificates; if not, it might be well to take into consideration how much the power of a body of men would be increased by an universal knowledge of the first rudiments of education. If the inducement of an additional 1*d*. a day were offered to men taking out 2d class certificates, the popularity and utility of the regimental school would soon be on a different footing. The money would be well laid out by the public, both during the career of the soldier, and in his after life as a citizen. Until some large popular scheme is established throughout the empire, whereby the education of children will be compulsory, some such grant as this is necessary to bring the grown up ignorant man into the edge of the bright disk of learning, and thus render useful the money already voted in this worthy yet costly experiment. The first beginning is every thing, and the reward would soon come. Let a man's feet by a gentle encouragement be brought to touch ground, and it is astonishing how rapidly the confidence to strike out for himself will grow on him; while in the suppression of crimes, caused by idleness and drunkenness, there is nothing which can compare to the means of enjoyment proposed, and rapidly promoted, by the primary advance in education.

Besides any reward for qualification which Government might hereafter be induced to put forward, there is another source from which considerable assistance might be gained; viz. the Canteen Fund of the regiment. From this, prizes are annually voted for feats of physical strength, and, I would submit, why not for mental skill as well? If

the sub-committee of the canteen, composed of non-commissioned officers, had authority to propose prizes to be competed for by soldiers attending school, it would raise the value of school attendance and diligence in the eyes of young soldiers. If these cannot be attracted when they first enter the service, the best time of all is lost. The money so voted for prizes would still all be spent in the regiment, whence it proceeded; and it would much enlarge the circumference of possibilities wherein all could hope to obtain a share of the profits, whether by mental or physical skill; some in one way, some in another. There are frequently large sums in these canteen funds which commanding officers are puzzled how to devote to some really useful purpose. I believe the plan would be favourably considered in all regiments, who at any rate might accept it or not as they pleased. It is the interest of the senior non-commissioned officers to see that young soldiers are rapidly brought forward in education, and to have them ready at hand in time of pressure to assist in making out the numberless returns and reports the routine of the service daily asks for.

The same remarks apply to the children's schools, which might be benefited more largely out of the canteen fund than they are at present. Regular attendance should form a claim to especial reward. There is, however, here one great excuse for mothers to keep their children at home. During the winter months, the principal time for school work, no fuel is allowed for the school-rooms. Malta, during the months of December, January, and February, is one of the most windy places in the world. Vegetation will not flourish except protected by stone walls, and there are no trees worthy that name in the place. Cold is quite a relative thing; and that fires are really wanted is proved by the fact that all houses, English and Maltese, and officers barrack rooms as well, use fires during this period. That young children, often too scantily clad, should shrink from coming on these cold boisterous mornings to the chilly cheerless school, is not to be wondered at; nor can profit be expected to result to those who do attend at such times. I beg to submit this little matter to the favourable consideration of the Council.

But besides the inducement which a pleasant warm room would be to children, others might be employed. Among them I beg to point out the German method of teaching young children to read as superior to our mode of hammering into their ductile brains by direct appliances. It is now often taught, and will be I make no doubt much oftener hereafter, by the help of the old and well known game of Loto. For instance:

C		A		T
S	M	I	T	H
	D	O		G
B	E		D	

App. II. No. 10.

a number of cards are dealt out among the children, when each child puts the one which falls to his lot before him. The cards are progressive; divided into lines, first filled with letters, then with words; then with sentences. A quantity of bone or glass counters with letters on one side

are before each child; and the teacher from a bag with other marked counters calls out letters in succession. For instance, taking a counter out of the bag, she calls out "A." The children with A on their cards select the A's from the heap of counters before them, and cover up all the A's on the cards. Then dipping her hand into the bag again, she calls out "T;" and the children at once hunting up the T's cover them up. "Oh," says a child, "I hope the next will be a C, then I shall "have a line covered with C A T, CAT." "No" says another, "I "hope it will be an H, then I shall have my line filled with H A T, "HAT." The child who covers her card first wins the game. Thus this process teaches the first rudiments by intuition, just as the eye to understand an object can only receive the knowledge by indirect light. I heard a lady of experience say the other day, that children learnt to read by this process (which amuses them, and keeps their attention wide awake) in one third of the usual time. The first impressions in education gained, the first outworks of ignorance stormed, is half the battle won.

I have, by permission, to point out a fault which might be rectified in future editions of the school maps. On reference the Council will observe that large portions of inland countries, or counties, are coloured with the same tint (or very nearly so) as that used to represent the sea. When a distinct impression of form and shape (which is the main object of the maps) is to be left on the minds, this mode of conveying it must often be confusing to young children.

So far as I can judge, fewer lectures with the magic lanterns have as yet taken place this winter than was formerly the case. The novelty of the thing having passed away has probably something to do with this; but unless the lecturer and machinery are of very first rate order, the gloom of the room and the want of life in the exhibition from this cause, militates much against its popularity. The lectures I have attended have not been very successful efforts from these causes; nor were my own efforts in this line a whit more so, though I used (before their introduction by Government) the finest dissolving lanterns and pictures which Carpenter and Wesley, the well known opticians of Regent-street, could supply. A clever man may make a lecture of this kind, on such a subject as astronomy (which happens to be a suitable subject) interesting and agreeable; but as a general rule, the disjointed nature of the performance, the inferiority of the matter offered, and the darkness of the room, do not tend to this desirable result. Finding this so, we adopted during the last two winters in Canada "Readings from celebrated English authors," which were very successful and largely attended; not only by our soldiers, but by their friends and the gentry of the place as well. The 7th Fusileers followed our example with equal success. The style of reading of Captain Pedder of the 7th and of Lieut. D. B. Harvey of the Royal Artillery was of a superior stamp, affording the keenest pleasure to their listeners. There is, I am sure, scarcely a regiment in the service where a few good readers among the officers could not be found; and the range of our literature is now so extensive and varied, that something to suit all tastes can easily be selected. Not long ago the 1/8th regiment had a reunion of this nature in their theatre in the Upper St. Elmo, when the reading of Captain Louis de-

lighted the men of the regiment. The present stock of magic lanterns and slides will last a long time, and always be popular among the children at Christmas time; but I should be sorry to see the principle extended without further consideration of its advantages.

The libraries and recreation rooms are popular with the men and are very useful. To make the former still more so, the larger the quantity of new readable matter introduced, the better. The great London circulating libraries have at stated periods accumulations of new works in excellent condition which they offer at greatly reduced rates. A regular influx of such works would be a welcome addition, and be highly appreciated by troops serving abroad.

Although of late years much has been done to establish an uniform system of education in the army, yet the one grand thing to make the system work remains still to be accomplished, and that is to popularise it with the men themselves. Let me take as an example the case of the 2/8th regiment now quartered in this garrison. The officer commanding, Colonel Robertson, has been indefatigable in his exertions towards trying to induce the men to attend school and work there with zeal and spirit. He established a night class, and became a frequent attendant at the school by way of encouraging the men. He also limited as much as possible all fresh promotions to those who took out school certificates. It is probably no exaggeration to say that the interest and trouble he has taken are not likely to be exceeded anywhere else. Yet the result was not encouraging. At one time he gave small rewards for regular attendance; but when these ceased, the attendance dwindled down to next to zero. In the abstract the men cared for mental improvement little or nothing; but a limited number had no objection to it, provided it was made worth their while. In fact there was no particular inducement for them to attend school: no prizes to obtain; no increase of pay; partial exemption only from other duties; which is in itself no inducement, as it merely substitutes one kind of work for another. By the returns now before me, it appears that out of 30 men who formed this special class (under the Colonel's own eye as it were) from the 1st of February to the 6th of July 1867, 2 obtained second class certificates, 4 third class: while 18 in reading, and 17 in writing, with the large average of 260 attendances each, remained absolutely stationary. It is scarcely possible to attribute such a result to any other cause than a want of interest in the work itself.

If therefore, only by way of experiment for any limited period, I now beg permission to submit a resumé of the suggestions which appear to me worthy of favourable consideration by superior authority.

1. That the officer commanding a regiment should select an officer (not under the rank of Lieutenant) to look after the schools, library, and recreation room. It would be the business of this officer to pick out and encourage likely men to attend school; look up good readers and lecturers among the officers and his friends; frequently visit the schools and recreation rooms, and generally look after the indoor amusements of the men. As a remuneration for this extra work, 1*s.* a day might be given, and it is probable that in every regiment an officer would undertake it.

2. That, provided a soldier is in possession of a good conduct badge (i.e. after three years service) the addition of a 1*d.* a day be made to his daily pay on his taking out a second-class certificate.

3. That so soon as this is brought into fair operation, thenceforward the promotion (except on active service) to sergeant from the rank of corporal, be confined as much as possible to men taking out first-class certificates.

App. II. No. 10.

4. That on the recommendation of officers commanding, or regimental boards, fuel be allowed to schoolrooms in winter months.

5. That greater discretion be permitted to officers commanding regiments, with the concurrence of their committees and sub-committees, in awarding prizes and encouragement from the canteen surplus funds to soldiers attending the regimental schools.

6. That a trial be made in infant schools of the inductive system of teaching the primary steps in reading.

The concentration of a number of regiments in a small nucleus, such as Malta or Gibraltar, affords great facilities towards trying, if even for a time, many of the above suggestions, with a comparison of the results between different corps. Hitherto the means for carrying out an excellent scheme of army education has been to a large extent granted by the public, though perhaps not to the full extent which would ensure the machine working effectively and smoothly. To make this expensive machine turn out adequate and expected results, a little oil, as it were, should be added, when I believe a vast difference would soon be perceptible. Each year we add to the scientific perfection of our warlike weapons, while at the same time the hands to use them remain absolutely in statu quo. In these days of experiments and costly war material, what would a few thousands laid out on so vital an object as the advance of soldiers in primary education not effect? The money in the long run would be repaid to the nation a thousand fold; and success in war must mainly depend upon the intelligence and aptitude of the men which, in future, Generals will have under them to carry out, in moments of emergency, the numberless accidents and vicissitudes of campaigns.

I have, &c.

(Signed) R. B. McCrea, Lieut.-Colonel, R.A.,
Local Inspector of Army Schools.

To the Secretary
The Council of Military Education.

Regiments in which Examinations for Certificates were held from 1st December to 31st December 1868.	Number of Certificates obtained in the several Classes.			Total Certificates obtained in all the Classes.
	1st.	2nd.	3rd.	
31st Regiment (18th Dec. 1868)	—	—	1	1
Totals of Certificates - - -	—	—	1	1
Totals of unsuccessful Candidates - - - -	—	—	—	—
Totals of Candidates examined				1

A 2nd class Certificate was awarded to Lance Corporal Smith at my annual examination of the regiment.

R. B. McCrea, Lieut.-Colonel.

Appendix II.—No. 11.

App II.
No. 11.

Sir, Montreal, May 2nd, 1868.

In this report on the army schools in the 2nd military district, Canada, I deem it unnecessary to append any very extended general remarks, as I have previously in my covering letters to examination reports for the year 1867, and the half-yearly reports for the same year, brought under the notice of the Council, pretty fully, the subjects connected with the state and advancement of the schools, to which reports I beg leave to refer you.

Religious instruction.

There is a falling off in religious exercises; it is only in some schools the orders upon this head are fully complied with; the masters urge that the special classes interfere with this important instruction.

Literary instruction.

Reading:—Many adults and grown children though they read well yet were wanting in taste and judgment. About one third of the readers were able to answer the questions arising out of the reading lessons with readiness and accuracy, and very few indeed could give the meaning of the words occurring in the lessons.

Penmanship.

There is not that attention given to this needful exercise which its usefulness demands. I have seen some beautiful writing in the books of the adults, but their hand was formed before enlisting.

Dictation.

In connexion with penmanship I would observe that more regard ought to be paid to the writing in this lesson, and also that it should not be confined to the senior classes, but that all who can write should share its advantages, and that the pupils themselves should correct the errors in spelling. With the special class and grown children there would be no difficulty about this; they could take the books to their rooms in the evening and bring them to school in the morning corrected.

Arithmetic.

With respect to arithmetic a considerable per-centage of the children and adults was in the simple and compound rules, and but a small per-centage was qualified to do questions in practice, simple interest, and simple proportion with readiness and accuracy, and but few were able to work questions in more advanced rules. I found great weakness in the theory of notation.

Grammar.

There was a fair per-centage of children returned as learning grammar, in some stage or other, but very few could do more than name the parts of speech, and point out a noun, an adjective, or an article, and the number was very small indeed that could discriminate the parts of speech correctly. This branch is not taught to adults.

Geography.

This subject is taught to most of the special classes and to nearly all the grown children, but I did not find that any great proficiency had been made; many knew the outlines of the map of the world, and several had a fair acquaintance with the map of Europe and the British Islands, but ignorant of the other continents.

English history.

This important subject does not get that attention which its utility calls for. An intimate acquaintance with it and geography is necessary to render intelligent most of the subjects treated of in the reading lessons. Coupled with this, there is no other study so well calculated to enlighten the understanding; besides, every school-going man and child should be made acquainted, in some way or other, with the glorious constitution under which we live.

App. II. No. 11. Organization, &c.

The organization and classification of the schools conducted by trained masters exhibits reflection and discrimination, and the ideas of nearly all the masters, for there are exceptions, of school government and of education are generally intelligent and judicious.

If uniform time tables were supplied, and it made incumbent upon the masters to adhere to the programme of studies therein, it would in my judgment be attended with a beneficial effect.

There is one more remark I desire to make: few of the masters teach from a mind full of the subject, and especially in the treatment of collective lessons, and there was manifested but little of the philosophy of teaching, or of adapting instruction to the laws which regulate the development of the human mind.

In making the foregoing remarks I do not wish it to be understood that the masters are wanting in ability, I rather attribute it to apathy which had its rise when the classification was abolished.

Infants schools.

I cannot speak in terms of approval of the method of teaching pursued in these schools; I allude particularly to the want of skill, or neglect evinced by the teachers in making no attempt, or if made it is in a manner very unskilful, to expand the minds of their pupils and to exercise their thinking powers.

The object lessons in the main were meagre and worthless.

Female industry.

Plain needlework is taught, and many of the elder girls sew neatly. In this department I found one defect prevail which ought not to exist, I allude to cutting out, this most important and necessary part of instruction is neglected; I would submit that it be made imperative on schoolmistresses to teach cutting out, and that at the periodical examinations the girls should be tested as to their proficiency in it, and from experience I would also suggest that no woman be appointed schoolmistress before passing an examination in cutting out.

Discipline, &c.

Discipline, order, and cleanliness are very well attended to in both schools.

I have treated of the conduct and efficiency of the teachers in the reports adverted to at the commencement of this report. I thought it needless to enter into any statistical matters.

I have, &c.
J. Little,
Superintending Schoolmaster.

FOR THE YEAR 1867.

Regiments and Corps in which Examinations for Certificates were held from December 1866 to December 1867.	Numbers of Certificates obtained in the several Classes.			Total Certificates obtained in all the Classes.
	1st.	2nd.	3rd.	
Royal Artillery 3d Brigade -	9	9	8	26
2nd Battalion 23d Regiment -	2	1	21	24
1st „ 25th „ -	1	2	5	8
30th Regiment - - -	—	1	—	1
1st Battalion 60th Rifles -	—	4	8	12
1st „ Rifle Brigade -	—	28	13	41
4th „ „ -	1	6	8	15
Royal C. Rifles - - -	—	4	3	7
Total of Certificates of the several Classes - -	13	55	66	134
Total unsuccessful Candidates	—	—	—	84
Total of Candidates examined	—	—	—	218

TABLE showing the NUMBER of CERTIFICATES in the several CLASSES obtained by different RANKS.

Class of Certificate.	Non-commissioned Officers, full and acting.	Privates, Gunners, and Drivers.	Trumpeters, Buglers, and Drummers.
1st - - - -	13	—	—
2nd - - -	36	19	—
3rd - - -	38	28	—
Total - -	87	47	—
Grand Total -	134		

Note.—1 of the above was obtained at my periodical examinations, the remaining 133 at special examinations.

The large per-centage of failures was due—to incorrect spelling with the 3rd class, failures in working up Ledger and Savings Bank Accounts with the 2nd class, and shallowness in the extra branches with the 1st class added to wretched composition and too free a use of capital letters.

J. LITTLE,
Superintending Schoolmaster.

App. II.
No. 11.

FOR THE YEAR 1866.

Regiments or Corps in which Examinations for Certificates were held from December 1865 to December 1866.	Number of Certificates obtained in the several Classes.			Total Certificates obtained in all the Classes.
	1st.	2nd.	3rd.	
30th Regiment	—	—	6	6
R. Canadian Rifles	1	—	—	1
Total of Certificates of the several Classes	1	—	6	7
Total of unsuccessful Candidates	—	—	—	20
Total of Candidates examined	—	—	—	27

TABLE showing the NUMBER of CERTIFICATES in the several CLASSES obtained by different RANKS.

Class of Certificate.	Non-commissioned Officers, full and acting.	Privates, Gunners, and Drivers.	Trumpeters, Buglers, and Drummers.
1st	1	—	—
2nd	—	—	—
3rd	3	3	—
Total	4	3	—
Grand Total	7		

Note.—1 of the above was obtained at my periodical examination, the remaining 6 at special examinations.

J. LITTLE,
Superintending Schoolmaster.

Appendix II.—No. 12.

App. II.
No. 12.

Sir, Toronto, C.W., 23rd April 1867.

I have the honour to forward for the information of the Major General Commanding, and for transmission to the Council of Military Education, my annual reports of the regimental and detachment schools of the first military division.

I had intended to have made my inspection of the regiments, &c. stationed at Hamilton, London, and Brantford, about the latter part of this month, but the district order of the 9th March (annexed) left me no alternative.

After a minute examination of the schools I beg to add a few remarks on their condition, &c.

The schools, both adults and children, notwithstanding the partial breaking up of them in June last, have made fair progress. The attendance of the ordinary classes is unsatisfactory. The constant duties and daily fatigues of the soldier prevent his benefiting to any extent from the advantages of education that now are open to him. I find that in some of the regiments there are several men who have only attended school once, or perhaps twice a month; this of course has prevented much progress; whereas in the special classes, where attendance is most satisfactory, a marked progress has been made by nearly all who comprise them. In many instances men who have been selected for the special class have been those of a very low standard of attainments.

The commanding officer 1/16th regiment informed me that he was much pleased with the progress of his special class, and it was a source from which he drew his non-commissioned officers, and he said it was his intention if possible to have a limited number of men formed into a class of this kind during the summer months. It is only from our special classes that we can look for good results.

I trust this system will become general throughout the service; commanding officers speak of it in the highest terms.

There has been a great desire on the part of non-commissioned officers, drummers, and privates to obtain school certificates, and the schoolmasters have done all in their power to forward these praiseworthy efforts. I am happy to say they have been attended with satisfactory success, 346 candidates have come forward since last examination, viz.

D. and G. Batteries, 4th Brigade, Royal Artillery Toronto, C.W.	6	candidates,	recommended	4
H. Battery, 4th Brigade, Royal Artillery, London, C.W.	2	do.	do.	2
2/7th Fusiliers, Brantford, C.W.	13	do.	do.	11
1/16th Regiment, Hamilton, C.W.	54	do.	do.	25
2/17th Regiment, Toronto, C.W.	203	do.	do.	101
53rd Regiment, London, C.W.	44	do.	do.	20
4/60th Rifles, London, C.W.	24	do.	do.	13
Total	346	do.	do.	176

App. II. No. 12.

and independently of those granted several are recommended in accordance with the instructions contained in the Fourth Report of the Council of Military Education, page xviii. (certificates), viz.

D. and G. Batteries, 4th Brigade, Royal Artillery, Toronto, C.W.	16	recommended.
13th Hussars, Toronto, C.W.	13	do.
Total - -	29	do.

for efficient work done in their copybooks, together with those recommended at the examination for certificates, will make 206 in this district.

In the 1/16th Regiment Schoolmaster Bramhall, by the permission of Colonel Peacocke, posted a notice in the schoolroom, pointing out the advantages of school certificates, a copy of which I annex.

I have been informed that many more would have come forward had my examination been a month or six weeks later, and for which many had been working during the winter months, particularly in the 2/17th regiment at their evening school.

I may also mention that the greater number of successful candidates for certificates are men from the special classes.

In the 2/17th regiment three examinations have been held by me for this purpose since December 1866.

The children's schools have made good progress during the past year, considering the irregularity of attendance (a serious drawback), caused I am told by sickness, removal of regiments, the non fitting up of schoolrooms (the accommodation for the men having to be completed previous to schools); these causes, with absence of parents on the frontier during the Fenian raid in June last, have greatly retarded educational progress.

The 13th Hussars, 2/7th Fusiliers, and 53rd regiments were not opened after their arrival in this district for several months. I did myself the honour of bringing this to the notice of the Major-General Commanding; as soon as they possibly could be opened they were.

In the infants and industrial schools, with one or two exceptions, caused by the want of school materials, &c., a satisfactory progress has been shown.

I beg to draw the Major-General's attention to the unfinished state of the infant school, 13th Hussars, at the Crystal Palace Barracks. The gallery which I pointed out to his notice on his assuming the command of this district, as being required, is still incomplete.

The schoolroom at the Old Fort occupied by the D. and G. batteries, 4th brigade, Royal Artillery, are too small for the number attending. Separate rooms are required for grown and infant children, whereas they are all instructed together. The room is very close, the ceiling low, in fact quite inadequate to the requirements of the batteries 4th brigade.

I believe an application has been made and plans submitted for the approval of the War Office for a new school at the New Fort, where nearly all the married people live.

The adult school there is also far too small, although about the best that could be afforded; it is used as a recreation room in the evening by the troops stationed there. What is required is a schoolroom to accommodate adults and grown children, and one for infants and industrial. If this could be done, regularity of attendance on the part of the children, particularly of the smaller ones, would be amended; at present they have to come twice a day over the common from the new to the old Fort, some distance for them, and in winter, when the ground is several feet

deep with snow, almost impracticable; in summer, when very hot, as it is here, as difficult of passage.

I beg to call the attention of the Major-General to the pleasing fact that at the Industrial Soldiers' Exhibition held in this garrison in May 1866 the industrial work of the schools of this district was very much admired, both by civilians and military; three stalls were devoted to it, and every sort of work was exhibited. Major-General Napier, C.B., was much pleased with this work and purchased for "Her Majesty the Queen" a beautiful embroidered child's dress, made by 2nd class schoolmistress Bramhall, 1/16th regiment, and the Royal Coat of Arms, worked in wool and silk, by 2nd class schoolmistress Brown, 47th regiment.

I beg to recommend to the Council of Military Education two 3rd class schoolmistresses, schoolmistress Wicks, 4th brigade, Royal Artillery, and schoolmistress Stuart, 53rd regiment; their schools are in a very creditable state, and I believe they have been more than six years 3rd class schoolmistresses.

The schoolmasters of my district are attentive to their schools and special classes, and their commanding officers report well of their zealous conduct and abilities.

The schoolmasters of the 1/16th regiment and 47th regiment were appointed Presidents of the Sub-Committees of their regiments at the Industrial Exhibition already mentioned, and exhibited several plans, drawings, and the latter conducted a newspaper with success.

Schoolmaster Jones, 4/60th rifles, is President of the library at London, C.W., which he conducts in an admirable manner, and the other schoolmasters are also deserving of praise.

I have, &c.
Samuel N. Stockham,
Superintending Schoolmaster.

Major of Brigade,
Toronto, C.W.

NOTICE.

Next month being the period for the annual examination for Government school certificates, the following advantages are pointed out to candidates.

1. *A third-class certificate* is a recommendation to the commanding officer for full corporal and dismisses a private from school.
2. *A second-class certificate* is a recommendation for full serjeant and dismisses a non-commissioned officer from school.
3. *A first-class certificate* is a recommendation for colour-serjeant.

The above advantages regimentally, together with its being a recommendation for a situation in civil life, will justify every man in trying to obtain *the highest class of certificate.* Candidates will please give their names to the school assistants or the schoolmaster.

By order,
E. Bramhall,
Schoolmaster, 1/16th Regiment.

Hamilton, C.W.,
1st March 1867.

N.B. The subjects for the above examinations correspond with the regimental examinations in the respective ranks.

App. II.

No. 13.

Appendix II.—No. 13.

To the Secretary to the Council of Military Education,
Great George Street, S.W., London.

Sir,

Annual report, schools, &c., Madras Presidency.

I have the honour to forward, with a view to its being laid before the Council of Military Education, the following general report on the schools, libraries, reading and recreation rooms, of the European troops in, or serving under the Madras Presidency, or of Fort Saint George, for the official year ending 31st March 1868. Having during the year transmitted to you, immediately or shortly after my inspections, detailed reports on the various subjects in connexion with the schools and reading rooms of the regiments, depôts, and batteries as per margin, a general allusion to these, I conceive, is all that is now required. I would beg most respectfully, however, to commence by stating that, previous to my appointment by the Madras Government in March 1867, there had been no superintendent of army schools in the Madras Presidency since October 1861, at which time, on account of the removal of my predecessor from office, the schools of the European regiments were placed under the Government (civil) inspectors, as had before been the case (G. O. G. 6th December 1859, No. 472). Bengal and Bombay had, for some years, been enjoying the advantages of military superintendence of army schools, which, in every way, especially in India, I humbly conceive to be the best; not only because a military officer knows (or should know) exactly what amount of education the soldier requires for the orderly room, for pay or quarter-master sergeant, or to make him generally useful in time of peace, or in the event of his retirement; but because by far the greater portion of the civil inspector's labours necessarily lies in a sphere of action essentially different from the military. It is, therefore, impossible, be he ever so energetic, that he can find sufficient time for, or take sufficient interest in, the soldier. What was considered a most useful office then, having been resuscitated in this Presidency, I entered upon my duties well aware of the difficulties I would have to contend against; not only difficulties caused by the previous want of military inspection, but by what I knew still to exist, even in an age with such a general thirst for knowledge as the present, in the minds of a few officers with whom I might come in contact, a prejudice against military education flourishing to any extent, and that it would devolve upon me to aid in preparing the way "for amalgamating the Indian with the Imperial establishment."*

Convalescent Depôt School, Wellington.
Royal Artillery Schools, 3 Batteries,
16th (Queen's) Lancers,
2/10th Regt. of Foot, Bangalore.
3/60th Royal Rifles, Fort St. George.
R. A. Schools, 4 Batteries, St. Thomas Mount.
Depôt School, Poonamalee.
Eur. Vet. Batt. School, Palaveram.
D. 20th Brig. Roy. Art.,
1/1st Royal Regiment, Cannanore.
B. By. D. Brig. R. H. A.,
H. M's. 76th Regiment, Bellary.
Roy. Art., 2 Batteries,
H. M.'s 2/24th Regt., Rangoon.
H. M.'s 2/19th Regt., Bangalore.
C. 23d R.A., Trichinopoly.

The latter object I have steadily kept in view throughout my year's labours. From not having received reports, you are probably aware that I have not yet inspected the schools at Nagpore and Secunderabad, having included Burmah in my tour of the past year. I intend to inspect the schools at the above two important stations during the present year. But I may here state that, although not yet inspected, I am fairly acquainted with their conduct from the regular monthly reports furnished me, and from having communicated with the commanding officers on subjects concerning their schools' welfare.

* See "Fourth Report by the Council of Military Education," page vii.

During the past year the following changes of regiments have taken place; the 102d regiment of foot (Royal Madras Fusiliers) left Kamptee for Bengal, and the 91st regiment from that Presidency supplied its place at Kamptee; the 108th regiment left Secunderabad for Bombay, and the 2/10th from Bangalore supplied its place; the left wing of the 3/60th Royal Rifles marched for Bellary from Fort St. George, and the 76th regiment left Bellary for Thayetmyo and Tonghoo in Burmah; the 2/19th regiment left Burmah, supplying the place of the 2/10th at Bangalore. There have been no changes in the regiments of European cavalry, and few of importance in the artillery. Out of the regiments above noted, you will observe that I had already inspected the schools of three of them during the year; viz. of the 2 10th, the 3/60th, and 76th; which last I was fortunate enough to reach on the eve of the corps departure for Burmah. Having, unaided, had to conduct throughout the year the whole of the correspondence, indents, &c. connected with the Madras army schools, in addition to having travelled nearly 6,000 miles, and this being my first annual report to the Council, I trust will account for any deficiencies in my remarks.

Changes of regiments.

Irregularity of attendance at school forming the chief difficulty in such a climate as that of Europe, we need hardly wonder it should form the chief impediment to the progress of military education in India. The remedy for this irregularity, I am aware, has for some years been anxiously sought for by the Council. The general attendance of adults, I am compelled to say, has been irregular. Instead of four hours attendance each week,* we must consider ourselves fortunate in India if we get four hours a month, or 80 minutes a month for each of the three subjects, reading, writing, and arithmetic. This 20 minutes a week for each of the three I should say was the maximum, which, after all, is better than 10 minutes a week set down by the local inspector, not long since, for a regiment at Malta. The 1st Battalion, 1st Royal Regiment,† as I have before reported, gave about four hours during the month; the 2/24th at Rangoon, where the duty was considerable, gave but one hour as the average attendance of each man per month. That great progress is to be made with such attendance cannot be expected; but that progress has been made is certain.

Attendance at school.

Schoolmaster Tapsall, of the Royals, showed me some excellent remarks he had written as a solution of the difficulty of irregularity of attendance. The purport of his remedy was what those well-skilled in army education know to be, perhaps, the only way. And many intelligent officers are quite aware of it, and adopt it in part. Every man in the army should clearly understand that he can never be promoted unless he possess the certificate of the rank to which he aspires. In times of peace, make it generally understood that promotion is attainable only through the regimental school. The school of Her Majesty's 2/10th, in the ordinary classes, I conceive to be about the best attended in this Presidency. A late report is most cheering, in addition to large numbers, giving 11, 8, and 7 hours a month respectively, for the privates, corporals, and sergeants. Her Majesty's 2/21st Fusiliers has been very strong in the number of attendances in the special classes, 34 privates, in the month of March last, showing 259; and the number is steadily increasing. The number of nights in bed, and the strength of the regiment or battery, perhaps, fluctuate in India more than in any other country; and hence the difficulty in affording correct statistics as to attendance. But I think I may safely say, that at present, the number of European soldiers attending school is greater than at any

H. M.'s 2/10th Regt.

H.M.'s 2/21st Fusileers, Secunderabad.

* Queen's Regulations, section "Schools."
† Cannanore.

App. II. No. 13.

The Artillery.

former period in the history of this Presidency. The attendance of the 2/19th has been more than doubled since its arrival in Bangalore. I am sorry to consider the attendance at school of the Royal Artillery* the least satisfactory of any branch of the army. And again I regret being obliged to agree with the opinion of General Sir R. Napier, applying the remarks on the artillery of the Bombay Presidency made by his Excellency to this, that the batteries of the regiment, "though "requiring a superior degree of intelligence, are inferior to the line "regiments in education."† But this I will say for the men of the artillery, their own professional work is greater for the number of men, and the number of nights in bed, generally, considerably less than in other corps, which partly accounts for irregularity and paucity of attendance.

Wellington Depôt.

The first station I visited after my appointment was Wellington, at which depôt I found no adults attending school. I soon heard that the schoolmaster had got 40 or 50 on the books; but the number has since fluctuated considerably. However, from the recent appointment of Mr. Tapsall, of the Royals, to Wellington, I hope to see an adult school in that sanitarium, with a steady and numerous attendance.

Special Classes.

The advantage of establishing special classes in schools cannot be over-rated. They are the life and soul of the military educational system; and in India, as in England, I believe that commanding officers are becoming more fully alive to their importance. The strong recommendation of the plan, in the Council's third report, precludes the necessity of my saying more regarding its merits here. If we get an attendance of three hours a day for five days of the week, in India, considering the climate, we may achieve as great educational triumphs as at home. Special classes are not so numerous in the regiments and batteries as I could wish; and some commanding officers act on the "specialty" more than others by excusing more parades and duties.

Children.

The attendance of the children at school throughout the year, in every branch of the army, has been very good. At the depôts of Wellington and Punamallee, many children have, doubtless, greatly benefited by the army schools; and, at Palaveram, there has been an unusual attendance of pupils; so much so as to call for an increase of teachers and materials for the male and female schools.

Infants and industrial schools.

The infants and industrial schools have generally afforded me satisfaction. In a country like India, where there is a general disposition to idleness, and orphans are so frequently thrown on their own resources, such schools demand every attention. The industrial work performed has been considerable.

Commanding officers.

The commanding officers generally support their schools, and take an interest in them, some of course far more than others. When attendance is not compulsory, the art of winning the men to school, especially those who can neither read nor write, if more practised in some regiments and batteries, would, doubtless, be productive of immense advantage. How much trouble is frequently saved to the officer by the soldier's understanding his own accounts.

Schoolmasters.

The conduct of the schoolmasters, with only one or two exceptions, has been very satisfactory during the past year. They are, generally speaking, a very intelligent, respectable class of men, quite up to their work, and well spoken of by their commanding officers. During the year two were named by the Horse Guards as fit to hold the appointment of schoolmaster to the sappers and miners in Bombay, the same being considered a superior post. Mr. Devereux‡ of the 16th (Queen's) Lancers,

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* Adults.
† Appendix to Fourth Report on Army Schools. Appendix II.—No. 6.
‡ Second class.

on my recommendation, was appointed. Superior qualifications being required, and, as I have since learned from Mr. Devereux, no extra pay being attached to the appointment, I trust that his promotion to first-class schoolmaster may follow. Mr. Robinson of the 2/10th, also named, I hope to see one day filling the appointment of superintending schoolmaster, should such, in the event of entire amalgamation with the home system, eventually be made in this Presidency. In former reports I have recommended him, and Mr. Cartwright of the 3/60th Rifles, for the appointment of superintending schoolmaster. The most important change has been the transfer of Mr. Shannon from Wellington to the 1/1st Royal Regiment at Cannanore. I would here beg to state, with reference to the new regulations submitted to schoolmasters during the past year, that the number of those who decided to be placed under them* was 19, inclusive of schoolmasters Douglas and McPherson, at Vizagapatam and Singapore. Eleven have decided to abide by the old, or did not elect the new regulations. Only one death occurred among the trained schoolmasters attached to this army during the last year (schoolmaster Tydeman of the 18th Hussars). The assistants have generally given me great satisfaction. The schoolmistresses have not disappointed my expectations; but they vary much in talent and qualifications for teaching. There have been two or three candidates for examination as third-class army schoolmistresses during the year, but only one has been examined and passed successfully, Mrs. Tydeman, (widow of the schoolmaster above mentioned,) now attached to the 18th Hussars; the others wisely resolved to postpone examination. A good manner with children, and considerable knowledge of what young boys and girls should know, are gifts not too common among our would be army schoolmistresses in India. The monitresses are in general intelligent and promising. I have in my reports during the year taken every opportunity of pointing out the extreme desirability of the best school accommodation that can be procured for such a climate as that of India. The want of it greatly retards the general spread of education. If an officer in his roomy well-ventilated house often finds it difficult to read or study from lassitude or ennui, how much more must the uneducated soldier be disinclined to learn lessons with such advantages of accommodation denied him. I trust in time to see a great improvement in the school accommodation of this Presidency, which is far from being generally satisfactory. An admirable plan was sent for my inspection during the year, at the request of the General commanding Mysore division by the Quarter Master General's department at Bangalore; that of a boy's school, to accommodate 100 boys in four classes, for the 16th (Queen's) Lancers. There is no standard plan for such buildings; so I trust to see this new one adopted, and the new schoolroom soon erected. All the regiments, and nearly all the batteries of artillery that I have inspected in the Madras army, as well as the depôts, have their libraries, the accommodation for such varying according to circumstances. Among intelligent European soldiers serving in India, reading must ever form a chief source of delight. The officers I have generally found most liberal in affording aid to soldiers' libraries, if not by subscription, by means of books and periodicals, when no longer required. I have before recommended a more frequent change in the books of garrison libraries. Pensioners in particular feel this want in an age remarkable for its continual changes.

New and old regulations.

Assistants.

School-mistresses.

Monitresses.

School accommodation.

Plan of new schoolroom.

Regimental libraries.

Garrison libraries.

These are very attractive in India, and may either be found in the same room as the library, or separate, which is by far the best, and is the most general plan. The library and recreation room of the 1/1st Royals

Reading and recreation rooms.

* War Office Circular, No. 821, Army Schools, dated 25th May 1863.

App. II. No. 18.

are among the best I have yet seen in India. Here the men amuse themselves with newspapers and games; such as chess, draughts, bagatelle, to a very considerable extent. The rooms are in general well lighted; and there is now no excuse for their not being so.

Lectures and readings.

I have for some years taken considerable interest in lectures, conceiving that, among the materials of a practically useful system of education, they are of no inconsiderable value; that they are particularly well adapted (varied by occasional readings from popular authors) to India; and that they come under the head of subsidiary education. The chief difficulty is in getting lecturers and readers. The lectures and readings given to the Europeans of this army during the past year have been far from so numerous as I could have wished; still something has been done. Shortly before appointment, I had written three military historical lectures on Charles XII. of Sweden, one of which I delivered, during a period of intellectual stagnation, at the depôt, Wellington, and the whole three eventually at Bangalore. The three lectures were condensed into one, which I gave to a large audience of the 2/24th at Rangoon. A reading to Her Majesty's 2/10th at Bangalore, consisting of my published sketch of the late General Neill's military career, with various military anecdotes, is all that I have time to add to the above in this sphere of action. The schoolmasters in the Presidency have not generally come forward, and I cannot account for their diffidence. Energy in India is wanting among the class to carry out the wishes of the Council in this particular, as they are carried out at home. Doubtless the field is much more difficult to labour in. The attractive power of the magic lantern, for illustration, is not by any means sufficiently used in this country. Schoolmaster Shannon followed up the example I had endeavoured to set at Wellington by giving 12 or more lectures on such interesting subjects as electricity and galvanism, English Revolution, Life of Cromwell, and arms, equipment, and uniform of the British army. Mr. Shannon, of Wellington, reported:—"There is a "magic lantern in the station, but there is no oil allowed for this "lantern. There is no arrangement in the Madras Presidency for the "circulation of slides, &c., similar to that adopted in England. The "one set 'Campaigns of Wellington' has been in this station for the "last four years." Doubtless ere long all that is required will be supplied. At Kamptee, I am glad to say, Colonel Taylor, of the staff corps, gave the Royal Artillery a lecture on the "last war with China," which, I doubt not, was fully appreciated by the men. The excellent readings of Major N. Campbell of the Royal (Madras) Artillery, I may say as concluding my remarks on this head, have done much to interest and amuse the soldiers at Bangalore; and I trust that the example set may cause more officers, who have the requisite ability, to come forward and afford mental recreation to the men, whose progress towards all that is good every genuine British officer has so much at heart. Ledger and savings bank accounts, in fact every mode of regimental account, generally speaking, I am convinced, are not neglected in the educational routine pursued in this Presidency. I have been particular in inquiring into these matters, knowing so well that a company or battery officer is sadly put about, when he has no able man ready to succeed to a casualty. I have pointed out to the soldiers and masters the importance of a knowledge of interest, and the quick conversion of money. A map of India has been sanctioned since my appointment for the Indian allotment, and the vast importance of this study I have done my utmost to impress on the minds of the soldiers and teachers.

Circulation of slides for magic lanterns.

Regimental and savings bank accounts.

Map of India.

Certificates of education.

These have also, by permission of his Excellency the Commander-in-Chief, with the sanction of commanding officers, been introduced. In consequence, however, of not being in the Indian allotment, they have

not yet become general. I granted two first class to the Lancers at Bangalore, and nine first class certificates to the 2/24th at Rangoon. They were much appreciated by the successful candidates in the latter regiment, Good reading, writing from dictation correctly, and progress in arithmetic, I think are becoming more and more apparent in this army. Religious instruction for the children has been well attended to throughout the year, under the supervision and tuition of the chaplains and schoolmasters, I cannot report favourably of the Hindustani class generally. The attendance I conceive to be both small and irregular; and this, I should say, has always been the case with all classes of the kind. I question whether the liberality of the Government in furnishing a regimental moonshee is at all adequately compensated by the progress made in Hindustani, To comprehend the exact idiom of the language requires men of considerable mental attainments; and without great study, for which the soldier has generally little time or inclination, the idiom cannot be learned, unless, what we never see, he converses with intelligent natives. I have before me a return of men attending the Hindustani class in a distinguished European regiment for the month of March last, signed by the regimental moonshee. The attendance is bad, and I doubt not, the progress is inconsiderable. The schoolmasters generally do not care about passing in the language. Some may pass in order to receive the expenses for moonshees to which they have been put, in order to indulge a partiality for the study; or they think that, prospectively, through this accomplishment they will better fit themselves for Indian service, and increase their chances of promotion. But very few think in this strain. At present, schoolmaster Cartwright, 3/60th, who has passed one examination, is studying for the high proficiency test, which he hopes to pass at Christmas next. Should he succeed, except him, I believe, none will have passed the higher, and very few the lower standard.

Religious instruction.

Hindustani class.

Difficulty of the idiom.

Schoolmaster studying.

As a fair statistical return of education among the European regiments under the Madras Presidency, I select the 76th, now in Burmah : There were 42 men who could neither read nor write; 35 men who could read but not write, or who could barely write their names; 686 men who could read and write; but no men of superior education. The latter are occasionally to be found. I must say, on the whole, that similar statistics to the above, furnished at my inspections, have afforded me considerable satisfaction. As a local inspector, I cannot refrain from here remarking, after upwards a quarter of a century of observation, that intemperance is the ruin of the majority of clever or well-educated men (European soldiers) in India. In my pamphlets on the regulation of canteens, and on the temperance question; the latter, with the view of enforcing self denial, or rather upholding it, rather than total abstinence, published during the past year, and the receipt of both of which has been acknowledged by the Council. I have attempted to point out, what will keep the soldier from excess in drinking, what will give him employment, and make him a wiser and a better man.

Educational return of H. M.'s 76th regiment.

Occasional remarks.

With the sanction of army head quarters, the form of monthly report, W.O. 367, has been brought into general use during the last year; and the regular receipt of such reports keeps me well acquainted with instances of falling off or progress. The school state, for inspection used at home, W.O. form, 1060, not hitherto being in the Indian allotment, I had printed at my own expense, and have regularly used it during my inspections. In only one or two instances have I received the half yearly report of education, W.O. form, 370; and regarding half yearly examination by schoolmasters report (report D.), I have received it in writing only, whereas I presume it should be printed. Even the written report has not been regularly sent me by commanding

Forms.

App. II. No. 13.

officers; but all such anomalies I hope soon to see disappear, having in January last received* the Circular Memo.† from army head quarters, calling the attention of commanding officers to Horse Guards G.O., No. 854, dated 18th October 1864, by which schoolmasters are to examine every half year, to enter the result in form D., and to send me a copy of the form forwarded to the Council. By strict attention to the various paragraphs in the General Order above, I doubt not that military education in this Presidency will be considerably advanced. But, in order to carry out the directions, everything required I presume will be at once allowed gratis, as I believe to be the case at home, to this Presidency. On the 29th of January last I wrote to the Madras army head quarters on this subject, remarking on the urgent necessity that now arose of making the issue of forms and books in this country "conform, as far as possible, to that in force in England." But his Excellency the Commander-in-Chief, I was informed, could not "recommend any alteration for this command unless a revised scale is "authorized for Bengal." A few days after I was much pleased at receiving a memorandum from the Adjutant General (forwarding a General Order by his Excellency the Commander-in-Chief in India), requesting that I should report whether "any similar General "Order published in this command would be of advantage, and if so, "suggestions thereon were invited." I at once had the honour to recommend‡ that an exactly similar order be promulgated in this Presidency, which would be of great advantage, "as commanding officers "would then be enabled to carry out the recent instructions from the "Horse Guards as regards half yearly examinations," &c. As I had the honour to remark, for the information of the Council, in my report on the Bellary schools of 14th January, the reading standards laid down in form D. differ materially from those sanctioned in the allotment of school books for India; and such being the case, it was thought that a difficulty in determining the standards of reading, so as to be like the system pursued in England, might arise; hence my desire for assimilation. I have only to add, that the regular half yearly examination of adults and children, particularly the latter, in this country, by the schoolmaster, I conceive to be more necessary than in England, where the energies of the pupils are far less liable to droop than in a tropical climate.

Half-yearly examinations.

Reading standards.

I have, &c.

(Signed) W. B. Laurie, Lieut.-Colonel,
Superintendent Army Schools, Madras Presidency.

Bangalore,
8th May 1868.

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* Adjutant General's Office, Fort St. George, 17th December 1867, No. 3241 Mem.
† No. 92, Adjutant General's Office, Head Quarters, Saugor, 29th November 1867.
‡ Letter No. 126, Bangalore, 26th February 1868.

Appendix II.—No. 14.

App. II.
No. 14.

No. 718.
H.

The Adjutant General, Army Head Quarters, Simla.

Sir, Kussowlie, 29th October 1866.

I have the honour to submit for transmission to the Council of Military Education, reports of the schools visited by me during my last tour of inspection, which extended from 5th January to 3d July, and embraced the stations of Central India and the Punjab.

2. I am sensible that the great delay which has taken place, again, in the submission of the reports, will be unsatisfactory both to his Excellency the Commander-in-Chief and to the Council; but I trust that the circumstances of the case will be admitted as a sufficient justification. Last year I was led to anticipate that other officers would be associated with me in the inspection of schools during the ensuing cold season, a certain district being assigned to each, and in this expectation, instead of starting in October as I had purposed, I delayed doing so till the beginning of this year. It was then my object to visit all the stations which I had not visited in my last previous tour; and this I accomplished, continuing my inspections throughout the hottest period of the year. But I was not able at the same time without the aid of a writer (which his Excellency had also recommended should be allowed) to prepare my reports, which are actually required to be in triplicate. Unfortunately also the resignation of Mr. Stapley, my assistant, at an early period of my absence, prevented me from sending the drafts to my office to be completed there; and moreover threw on me a quantity of correspondence, which would otherwise have been disposed of in the office. On my return I found a large accumulation of pressing work lying undisposed of, my soldier clerk having, I am sorry to say, done very little during my absence. Under the above explanation, I trust I may claim the indulgence of the Council for having failed to comply with their request that I would submit my report in time for it to be incorporated with their general report for 1865–66.

3. I have no expectation of being able to start on my tour this cold season much earlier than I did in the last, and purpose to commence my inspections at Calcutta immediately on the opening of the schools after the Christmas holidays. Though I hope to be able to visit the schools at all stations not taken last year (they being fewer and the facilities for travelling much greater), I do not purpose to *impose* upon myself the whole of this; but to make it my special aim strictly to carry out the rules laid down by the Council, and complete the report of each school before leaving the station, getting through simply as many schools as I can in the time available.

Adults.

4. Adverting to the reports of my inspection, it will be seen from the abstract accompanying them, that I examined 2,664 adults, and recorded their status. I was able only in three or four instances to record progress, as in the remaining schools there had been no previous examination in which the individual status of each pupil had been noted.

Reading.

5. The abstract shows the following results: in Reading about 42 per cent. had attained the two highest standards (either of which indicates ability to read any ordinary book very fairly indeed), while 38 per cent. were below the lowest standard (that is, were unable to read the easiest book with any degree of facility).

Dictation.

6. In dictation nearly 25 per cent. had attained the two highest standards (which corresponding with those in reading, indicate at least

App. II. No. 14.

ability to write down orders with very fair accuracy), and about 34½ per cent. were below the lowest standard,—a large proportion of these had not attempted to write from dictation.

Arithmetic.

7. In arithmetic the two highest standards (the lowest point of which is the rule of three) embrace only about 12 per cent., while 38½ per cent. are below the lowest, that is, unable to do easy sums in the simple rules. Arithmetic is, I consider, as a rule throughout the schools less successfully studied than the other branches, and, as I believe, mainly for this reason, that whereas a man must progress in reading and writing by his own individual effort without much extraneous aid, there are many ways in which he receives assistance when working arithmetic in class, such as glancing at his neighbour's slate, looking at the rule or answer for a clue, which enable him apparently to progress to his own and his teacher's satisfaction, but which fail him at an examination where he is thrown entirely on his own resources. The want of text-books in arithmetic has doubtless been a great drawback, necessitating the almost exclusive adoption of collective instruction from the black-board, which does not tend to render the scholars independent in their work.

The results in this branch, as recorded by me, are I apprehend, somewhat (though not designedly so) to the disadvantage of the schools, as in a great many cases men had studied higher rules than are comprised in the standards awarded by me, and may have possessed a fair knowledge of them, though failing to work satisfactorily the particular sums given at my inspection. In most cases my results (in arithmetic only) were lower than those given at the preliminary examination by the schoolmaster, who had better opportunity of knowing the scholars' actual attainments.

Standard "above A."

8. I made no attempt to assign the standard "above A." in either reading or dictation, as there are no books in use in the schools of sufficient difficulty, in my judgment, to merit this distinction; and in arithmetic the number of men I found with knowledge above the high requirements of standard A. was very small indeed.

Writing.

9. In the report on each school I have usually recorded the number of good writers, and I think it is a pity that writing is not included in the tabular statement of attainments, for though forming one of the most important acquisitions for a soldier, it is, according to my experience, one of the last attended to. I could adduce an instance of an advanced class working algebra, mensuration, and trigonometry, in which there was hardly a scholar who could earn his livelihood by writing in the humblest mercantile office.

Special classes.

Special classes have been in many cases introduced since the issue of his Excellency's circular of last year. I found them existing in 14 schools aggregating 300 scholars. The want of previous written examinations prevented my recording minutely the progress in these, but when fairly carried out I had no doubt of their success. In a few instances, however, I found a total want of appreciation of the real nature of a special class, the essential characteristics; viz., selection of the men, exemption from the less urgent military duties, and increased periods of instruction, not having been attended to. In such cases I pointed out what appeared to me the intention of the orders on these points.

Hindustani classes.

10. I have not found much increase in the numbers of men studying Hindustani, but there is certainly greater effort made on the part of the scholars to attain a practical result to their studies, since the revision of the standards for examination in the native languages. Out of 93 Hindustani scholars, I found 40 with a very fair knowledge of Oordoo and Hindee; and eight men were brought to my notice as having

passed the first standard; of these three were from the 2d Battalion, Rifle Brigade.

Certificates of education.

11. I was able to do little in the way of examining or recommending for certificates of education, the attention of the scholars not having for the most part been drawn to the desirableness of obtaining them, or to the special branches of study required for their acquisition. The numbers recommended were as below :—

For 1st class 13. 2nd class 26. 3rd class 102.

Children.

12. Children. Of 436 grown children examined I found —

In reading, 22½ per cent. in the two first standards, and
22¼ per cent. below the lowest.
In dictation, 13 per cent. in the two upper,
49¾ „ below the lowest.
In arithmetic, 7¼ „ in the two upper,
56 „ below the lowest.

The upper classes usually receive instruction in scripture history, geography, English history, and grammar, the results having been most satisfactory in the two first-named subjects.

Advanced boys.

13. I have particularly mentioned five boys as well advanced in all branches, and deserving of special commendation; viz.

Boy Butcher, 19th Hussars.
„ Patterson, 51st Regiment.
„ Sweeny, 79th „
„ Brand, 93d „
„ Archer, 104th „

Girls and industrial department.

14. The general results in regard to the attainments of the grown children are greatly lowered, particularly in arithmetic, by the backwardness of the girls. The opinion expressed in my last report of the disadvantages of entrusting the instruction of the grown girls as well as of the infants to the schoolmistress, is entirely unaltered. I cannot say that I have a high opinion of the teaching powers of the regimental schoolmistresses as a body, though in the charge of the infants, and particularly in the conduct of the industrial department, they are doing good and valuable service. Of 289 girls whose needlework I saw, I found 61 able to make dresses of various kinds, and 69 able to make under clothing and the easier parts of dresses.

Conduct of schoolmasters.

15. I am happy to be able to report very favourably of the general good conduct and zeal of the schoolmasters: in one instance only (that of the schoolmaster, 7th Hussars, regarding whom a reference has been before his Excellency in a separate form) I found some dissatisfaction expressed.

Want of school materials.

16. I have been obliged to report in nearly every instance a great want of necessary materials for instruction (not including stationery proper), in some cases to the extent of rendering the schools in a great degree inefficient. The causes of this want were explained in my last report. As a good supply is now in course of distribution, and there is a fair reserve to meet emergencies, I trust this is the last time I shall have to report to this effect.

Furniture for infant schools.

17. The provision of suitable furniture for infant schools is a thing to be desired, but this want has not as yet been brought specially to the notice of the authorities in this country.

Regimental libraries.

18. The few particulars given of the regimental libraries will afford the Council some idea of these institutions in India: being in a great degree private, and under regimental management, I did not think it necessary to ask commanding officers for suggestions.

Assistant Superintendent of army schools.

19. Though not strictly in connection with the subject of this report, I would allude to the appointment in the room of Mr. Stapley, as Assistant Superintendent of Army Schools, of 2d class schoolmaster S. Purdon,

App. II. No. 14.

lately attached to 2d Battalion, Rifle Brigade, of whom, as in charge of his school, I have more than once reported most favourably; and whose presence in my office will enable me to leave on my approaching tour, with much more satisfaction than I could otherwise have done.

Mr. Purdon has already proved himself of the greatest assistance to me.

I have, &c.
F. W. Dunn, Captain,
Superintendent of Army Schools.

App. II. No. 15.

Appendix II.—No. 15.

No. 602.

The Adjutant General, Army Head Quarters, Simla.

Sir, Kussowlie, 16th August 1867.

I have the honour to submit, for transmission to the Council of Military Education, reports on 30 schools visited by me during my late tour of inspection, extending from 21st January to 30th June. I have also forwarded duplicates of these reports for the information of his Excellency the Commander-in-Chief; but as I have not kept in addition copies in my office, I would request the favour of the return of the duplicates when no longer required. Abstracts (or, essentially, copies) have also been sent to commanding officers.

2. I regret that I have failed to fulfil the promise made in submitting my last report, of despatching each report immediately after the inspection of the school, and can only say in explanation, that I underestimated the labour which such a course would involve, and that I must freely acknowledge the work of inspection under the present system too heavy for me. I earnestly hope that the arrangements under consideration for the more effective supervision of schools in this Presidency may not be much longer delayed.

3. I beg now to submit a few general remarks on the schools inspected by me. The regiments in the Lower Provinces are much more sparsely scattered, and more broken up into wings and detachments than in the Upper Provinces and Punjab, so that although I secured as large attendances as possible, and examined about 60 per cent. of the total numbers on the school rolls, the number of adults examined during the late tour is considerably less than in the previous one.

Attendance.

4. In regard to attendance, it will be observed from the accompanying return A., that a large proportion of the adult scholars are attending by order; viz. 53 per cent of the whole (47 per cent. being non-commissioned officers, including lance corporals), and if four regiments in which the attendance is wholly voluntary are excluded, 61 per cent. of the whole are attending by order. The daily attendance of this description of scholars is of course as frequent as duty will admit, as is also that of the voluntary scholars in the majority of regiments, so that the number of scholars whose daily attendance depends upon their own will is comparatively small. In a few schools, as those of 105th and 107th regiments, in which the barracks are widely separated, of the wing of the 58th regiment, in which the duties of a whole station are taken by the wing, of the 5th lancers and 101st regiment, in which the

scholars are allowed to attend only on what days they please, the daily average of attendance is low, varying from 18 to little over 30 per cent.; but in the majority of the schools the daily attendance is better, and in some very fair, ranging from 40 to as high as 70 per cent. The attendance is on the whole, I apprehend, somewhat more regular in this country than in England. That in the schools of the Royal Artillery is rather higher than in the Cavalry and Infantry, and in general the attendance of the privates is more regular than that of the non-commissioned officers.

Adults' attainments.

5. The total number of adults examined by me was 1,550.

Reading.

In reading about 57 per cent. had attained to the standard A. or B. (either of which indicates ability to read any ordinary book freely); and 10 per cent. were below the lowest standard (that is, unable to read the easiest book with any degree of facility). It will be observed that I have recorded hardly any as able to read *above* standard A. The book laid down for standard A. contains as difficult passages as any ordinarily met with, and as only those scholars who can read this book quite freely are classed in standard A., it is difficult to see how an inspector in hearing a class read once round is to decide that certain men are deserving of a higher standard. In the few cases in which the standard above A. has been recorded, the excellence of the men's reading has been in some way brought specially to my notice.

Dictation.

In dictation about 39 per cent. had attained one of the two highest standards (indicating at least ability to take down regimental orders with very fair accuracy), and about 24 per cent. were below the lowest standard, of whom a considerable proportion had not attempted to write from dictation.

Arithmetic.

In arithmetic the two highest standards (the lowest point of which is the Rule of Three) embrace about 20 per cent. of the whole number examined, 40 per cent. being in various stages of the compound rules, and 27 per cent. below the lowest standard, that is, unable to work the simple rules. I have found some difficulty in awarding the standards in this branch, owing to the number of instances in which the scholars have failed to work correctly the sums given at my examination, while evidently possessing some knowledge of the rules, but wanting in accuracy and independence in working. In such cases I have allowed my judgment to be in a measure guided by the work done at the schoolmaster's examination. The scholars undoubtedly work at some disadvantage in an inspector's examination, in which they are usually crowded, and of necessity restricted as to time. Nevertheless I cannot help coming to the conclusion, from inspection of the work done at the schoolmaster's examinations, that too much latitude is very often allowed by the schoolmaster. The sums are worked over and over again on slates, and errors pointed out (though I do not believe that direct assistance is given), and when at last the correct answer is obtained, the sum is entered in the book as though correctly done in the first instance. I believe it would very much conduce to correctness and independence of work amongst the scholars if the use of the slate were prohibited at examinations. The books would doubtless look less neat than they now do, as sums incorrectly worked would be crossed out and re-worked, but they would afford a much more correct estimate than they now do of the real capabilities of each scholar. A part of the ordinary instruction in school should I think be the practice of working, in books set apart for that purpose, without the aid of slates, exercises in rules that have been studied.

Geography and history.

I found geography taught as a separate subject in 14 of the schools I inspected. English history in 9, and grammar in 6, but I cannot say with any great result in any. The instruction given is doubtless in many

App. II. No. 15.

cases suitable and systematic, but that *received* by each individual is very desultory, and the knowledge acquired is seldom sufficient to enable the scholars to give at all full or connected answers to questions on these subjects. I have not as yet seen the plan tried of the formation of select voluntary classes for the study of these subjects, by which I cannot but think more appreciable results might be attained. The arrangement I propose, is that the schoolmaster, or any of his qualified assistants, should give, say two lessons a week on geography or history, at some time when he could place his ordinary class in charge of another teacher, and that the scholars volunteering for the study of this special subject should leave their regular classes for the time to attend to this lesson, the other men going on with their ordinary work.

Hindustani classes.

6. Thirteen of the schools had Hindustani classes at work, aggregating 125 scholars, of whom nine had already passed the examination in the first standard, and were advancing towards the higher standard; 12 were nearly fit for examination in the first standard; 36 had made some progress in reading and translation; and the remaining 68 were beginners. Throughout the army in this Presidency, during the year ending 31st May 1867, there have been 38 Hindustani classes at work, with an average number on the roll of 6·6 scholars, and an average daily attendance of 3·3 scholars. As a rule I do not think the Moonshees in charge of these classes are sufficiently well acquainted with English to explain the construction of the Hindostanee language to the pupils.

Regimental accounts.

7. Regimental and savings bank accounts are generally taught in the schools of British regiments, but much attention has not as yet been given to these branches in the schools of the artillery, in fact few of the acting schoolmasters of batteries are competent to teach them. A text-book on regimental accounts, with forms, rates of pay, and interest, and examples to be worked, appears to me a great desideratum.

Schoolmasters' examination.

8. As regards the results of examinations conducted by the schoolmasters, I think they may generally be accepted as showing fairly the status of the schools. In order to show the comparative judgments formed by the schoolmasters and myself, I have prepared a return, lettered C., of results in respect to those adult scholars actually examined by both. From this it appears that for every hundred recorded by the schoolmaster under each standard, I have recorded as follows:—

	Reading.	Dictation.	Arithmetic.
Standard A. (including above A.)	104	90	49
,, ,, B.	104	102	92
,, ,, C.	96	95	87
,, ,, D.	76	100	127
,, ,, E.	—	—	105
Below D. or E.	115	115	138

The material difference that exists in the higher standards of arithmetic, I attribute to the circumstance, that whereas the schoolmasters have included all men under the various standards who are working the rules for such standards, and have some general idea of the rules, I have only included those men who are thoroughly acquainted with, and able to work independently, at least one of the rules of the standard. The distinction between standards C. and D. appears hardly sufficiently marked. I have frequently seen very easy sums in the compound rules with money, and a single very easy reduction sum in weight or measure given as the test for standard C., the latter sum alone (the additional information to work which could be acquired in an hour) being considered sufficient to raise the standard from D. to C. I have always considered standard C. to imply a good knowledge of the compound rules in money, weight, or measure, and consequently have assigned standard

D. to many men who had been recorded in standard C. by the schoolmasters.

9. No large number of candidates for certificates came forward for examination. I observe that certificates of the 3d class are not so much sought after as might be expected from the comparative ease with which they may be obtained; and the number of men who have studied with the special view of obtaining the higher certificates is small. The extra subjects required for the 1st class certificates are a great obstacle in the way of candidates coming forward, and I cannot but think it would be an improvement if the essentials for this class were limited to thoroughly good reading and writing, correct spelling, and a good knowledge of the higher rules of arithmetic with application to regimental accounts; any addititional subjects in which the candidates might pass being recorded on the back of the certificate. For at present there is no means of certifying that a soldier is a thoroughly good arithmetician and clerk, unless he has given his attention to special subjects, as geography, history, algebra, or mensuration, which comparatively few care to do. The number of candidates examined and passed by me was as follows:—

	1st Class.	2d Class.	3d Class.	Total.
Examined for	31	89	127	247
Passed for	12	53	88	153
Percentage passed	38	59	63	62
Total rejected				94

I have not attempted to recommend for certificates any men who did not specially present themselves for examination; the inspection of a crowded school not affording opportunity for the strict examination prescribed in view to awarding certificates.

In one regiment I heard that the candidates were generally dissatisfied with the character of the questions set, and thought they had not a fair chance. I must say I have always endeavoured to make the questions testing ones, and that I have expected them to be worked independently and correctly; but I have never willingly set a "catch" question. I forward a set of questions of the character of those set by me, and should be very glad to be informed if they are such as would be approved by the Council.

Of the schools not inspected, four only have brought forward candidates for certificates since the promulgation in January last of the order for the questions to be set in this office; and I am not in possession of returns of certificates granted by boards of officers previously. The numbers examined and passed are as below given:—

School of	Candidates for			Total Candidates.	Passed for			Total passed.
	1st.	2nd.	3rd.		1st.	2nd.	3d.	
7th Hussars	13	7	2	22	9	5	1	15
1/11th Regt.	3	12	12	27	2	9	10	21
1/23rd „	4	13	4	21	2	3	—	5
Roy. Artillery, Umballa	—	9	1	10	—	4	1	5
	20	41	19	80	13	21	12	46

App. II. No. 15. Half-yearly examinations.

10. I regret to say that in several instances the half-yearly examinations have not been regularly held, in some cases through the neglect or ignorance of schoolmasters or acting schoolmasters. My special attention will be given in future to this point. For the above reason I have been unable to record progress in all cases.

I think yearly examinations would be preferable to half-yearly, in this country, where the instruction is so liable to be broken in upon by long marches, formation of cholera camps, &c., and where the hot season is so unfavourable to the attendance of the children, and the cold (drill) season to that of the adults. If the period immediately preceding the Christmas vacation were fixed upon for the examination (or in event of a regiment marching, the latest opportunity antecedent to the march), the inspecting officer, presuming the proposed increase to the inspecting staff be carried into effect, would generally be able to arrange to visit each school within two or two and a half months before or after Christmas, and thus the schoolmaster's preliminary examination would be nearly always coincidental with the yearly examination,* and the one would suffice for the whole year.

Special classes.

Special classes existed in 11 of the schools inspected by me, having an average number of 27 on the roll, with an average daily attendance of 16 scholars. The largest is that of the 1st battalion, 11th regiment, numbering 77, with an average daily attendance of 54 scholars. This class I was unfortunately not able to inspect, the school being broken up on account of cholera, but as it has been already specially noticed by the Council of Military Education, the omission is of less consequence. The 2/12th, 36th, 37th, 91st, and latterly the 101st regiment have also considerable and successful special classes, but that of 36th regiment is mainly used for the purpose of qualifying lance corporals for their duties. Amongst the schools not inspected 12 special classes exist, with an average number on their rolls of 22½, and daily attendance of 14½. There is, I believe, a growing feeling in favour of these classes amongst commanding officers.

Children's schools.

11. Regarding the children's schools I have little to remark. The attendance at them is generally very good, but the attainments of the children are much diminished, and their progress retarded, by the climate, which admits of comparatively little instruction during the summer months.

Of 366 children examined (77 per cent. of the whole number on the roll), I found in,

Reading 26 per cent. in the standards A. and B.
17 „ below lowest standard.
Dictation 15 „ in two upper standards.
42 „ below lowest standards.
Arithmetic 7·6 per cent. in the two upper standards.
18·8 „ in standards C. and D. (compound rules).
56 „ below the lowest standard.

In only three schools that I visited is the arrangement carried out of having the grown girls as well as infants taught by the schoolmistress; in one of these there is no schoolmaster for the children; and in one I was obliged to recommend that the girls should be removed to the schoolmaster's school. The girls are generally equal to the boys in reading and spelling, but much behind them in arithmetic.

Infant schools.

I am not altogether satisfied with the state of the infant schools. Little is taught in them beyond reading and writing, with a little practice in counting and learning tables. Some lessons on objects,

* *Vide* paragraph 5, App. VI. No. 1. to 2d Report of Council of Military Education, page 66.

natural history and scripture are occasionally given, but I cannot say the results are very appreciable. I consider the rooms allotted for the infant schools are little suited for the purpose, that in the Fort at Calcutta being the only one fitted with a gallery, the others being for the most part either a portion of the general school, without special arrangements, or small side rooms without fittings of any kind. It seems very desirable that in the barracks of each regiment an apartment of sufficient size should be permanently set aside for the infant and industrial school, and fitted with a gallery.

In some infant schools I have found the infants writing or attempting to write in copy-books, and have drawn the attention of the school-mistresses to the instructions of the Council* on this point. I have not, however, supposed the prohibition to extend to the formation of letters on slates, which seems a very useful aid to the instruction in reading; and as the infant schools are conducted in this Presidency could not be discontinued without much time being left unemployed by the infants. I generally find the infants to take great delight in writing on slates, and in one or two schools have seen infants of under seven years able to write on slates almost any easy sentence they can read, an acquisition which gives them great advantage on entering the master's school. As these have never attempted to handle a pen, they cannot I apprehend have acquired any bad habits to hinder the instruction in the use of that implement.

Industrial schools.

13. The industrial schools are generally well conducted and successful. I think it would be a great improvement on the present plan of granting a money allowance for each child attending the industrial schools, if a depôt were formed in Calcutta (say in connection with the depôt for books in the Military Store Keeper's office) for materials used in these schools, and regiments were allowed to indent on such depôt for materials according to an authorized scale. At present materials are purchased in up-country stations at great disadvantage, and there is not the check which is desirable upon the outlay, or expenditure of the materials. This suggestion is based upon a similar one made by J. P. Sargeaunt, Esq., assistant inspector for North Britain, but the subject has long occupied my thoughts. Some years ago I tried the plan of entering into a contract with Calcutta tradesmen to supply the articles required for industrial schools at fixed rates, and found commanding officers very ready to avail themselves of the arrangement; but the plan failed because the European tradesmen charged too high for the articles, and the native tradesmen failed to adhere to their contracts. If the materials were purchased in England at wholesale prices, and kept in store at Calcutta, I feel sure that the arrangement would be a very advantageous one.

Pupil teachers.

14. I would beg to draw special attention to the fact, that the system of having pupil teachers to assist in the infant and industrial schools on a graduated rate of salary according to length of service, has not yet been introduced into this country. Monitresses only are allowed on the uniform low rate of pay of Rs. 5½ per month, which offers no inducement to these persons to improve themselves, or stay in the school after they are qualified for their duties. In one large infant school I found three monitresses, all recently appointed, very partially qualified, and apparently without much interest in their work. If only on this ground, it is most desirable that the British army school regulations should speedily be made applicable to India.

School assistants.

15. I also beg to draw attention to the recommendation of Colonel Hood, commanding 58th Regiment (contained in the report on the

* *Vide* 4th Report of Council of Military Education, page xxix.

App. II. No. 15.

school of that corps) in regard to soldier assistants being allowed supernumerary rank, with pay, according to the length and efficiency of their service in the school, an arrangement which would assuredly secure an efficient class of soldier assistants.

Conduct—schoolmasters and schoolmistresses.

16. I have had no complaints during my tour regarding the conduct or efficiency of the schoolmasters and schoolmistresses. The majority indeed seem to give the utmost satisfaction in the discharge of their duties.

Lectures.

17. I can only report two lectures as having been given during the past year; these by Schoolmaster Mills, 55th regiment, the opportunity for delivering which is due to the liberality of Colonel Hume commanding that corps. No reports regarding the circulation of magic lanterns through the stations of this Presidency come to my office, and I am therefore unable to afford further information.

Reading and recreation rooms.

18. The reading and recreation rooms are so entirely under regimental management that I have not thought it necessary to report regarding each separately; but I have embraced in a return for the information of the Council the leading particulars regarding them. In two stations, Calcutta and Dum Dum, are most admirable soldiers' institutes, supported partly by subscriptions from members and partly by public contributions, and affording the soldiers subscribing to them ample material for rational enjoyment and improvement.

Assistant Superintendent of Army Schools.

19. The routine duties of my office were conducted during my absence in a very careful and efficient manner by Mr. S. Purdon, (temporary) Assistant Superintendent of Army Schools, whom I would beg specially to recommend to the favourable consideration of his Excellency the Commander-in-Chief and the Council of Military Education in any future arrangements that may be made for the conduct of the army schools in this Presidency.

School materials.

20. I am glad to say that I am no longer compelled to report the great want of school materials, which I have for some years had to remark upon. The schools are now very fairly supplied with the necessary materials. There are still a few deficiencies, chiefly in the infant schools, but on receipt of the reserve stock applied for in January last, I shall be able to supply all pressing wants.

I have, &c.

(Signed) F. W. Dunn, Captain,
Superintendent of Army Schools, Bengal,
Assistant Inspector.

Appendix III.

E marking Degrees of Progress as shown by Examination Books in Adult Schools, from Superintending Schoolmasters' and Assistant nspectors' Reports, 1867.

Regiments.	Books	Dictation.				Books	Writing.				Books	Arithmetic.			
	Number of examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of examined.	Great Progress.	Progress.	Stationary.	Gone Back.
Guards	23	2	16	5	—	23	2	17	4	—	24	7	11	6	—
„	25	3	13	9	—	28	5	10	8	—	25	7	14	4	—
Horse Guards	19	2	9	8	—	14	2	4	8	—	12	1	2	9	—
goon Guards	85	—	39	46	—	85	2	72	11	—	85	2	54	26	3
„	13	2	8	2	1	13	2	8	2	1	13	2	8	2	1
„	37	12	20	5	—	37	11	25	1	—	37	3	32	2	—
„	17	—	12	5	—	17	2	12	3	—	17	—	9	8	—
goons	48	—	48	—	—	48	—	48	—	—	48	—	47	1	—
„	48	3	28	17	—	48	3	43	2	—	48	2	30	16	—
ssars	70	—	45	25	—	70	—	55	15	—	70	—	42	28	—
ncers	72	1	50	21	—	72	3	46	22	1	72	3	43	24	2
agoons	30	3	16	11	—	30	4	11	12	3	30	2	12	15	1
ssars	23	—	17	6	—	23	—	17	6	—	23	—	18	5	—
ncers	59	—	46	13	—	59	—	53	6	—	59	—	56	3	—
assars	92	—	19	64	9	92	2	38	48	4	92	—	16	61	15
ncers	60	7	53	—	—	67	3	63	1	—	67	9	57	1	—
assars	60	6	30	24	—	60	10	32	18	—	60	8	29	23	—
„	42	6	16	17	3	42	5	30	6	1	42	14	19	8	1
„	15	2	8	5	—	16	2	8	6	—	16	—	8	8	—
ncers	15	—	7	8	—	16	—	11	5	—	17	1	11	5	—
y Train—															
lershot	35	—	27	8	—	35	—	33	2	—	35	1	27	6	1
olwich	95	—	26	63	6	96	—	49	47	—	93	—	34	53	6
lier Guards—															
Battalion	97	4	48	45	—	97	8	56	33	—	99	3	42	53	1
„	58	—	20	35	3	55	1	22	28	4	60	2	35	22	1
„	58	1	29	28	—	58	4	32	17	—	57	3	29	25	—
ream Guards—															
Battalion	50	1	14	33	2	50	1	27	18	4	50	—	15	34	1
„	198	2	101	95	—	293	10	143	139	1	235	25	102	107	1
usilier Guards															
Battalion	41	1	27	13	—	39	4	24	11	—	48	6	22	20	—
„	74	9	26	37	2	69	13	28	27	1	74	4	29	35	6
pt, 2nd Batt.	8	1	5	1	1	8	1	6	—	1	8	1	5	1	1
2nd „	67	—	37	30	—	67	1	54	12	—	67	2	35	29	1
1st „	17	—	12	5	—	17	—	15	2	—	17	—	13	4	—
2nd „	113	12	58	43	—	113	15	63	35	—	113	17	71	25	—
1st „	130	—	19	111	—	130	6	70	52	2	130	4	31	94	1
2nd „	29	—	12	16	1	29	—	14	14	1	29	4	19	6	—
1st „	4	—	—	4	—	6	—	4	2	—	6	1	4	1	—
2nd „	90	1	64	25	—	90	6	65	16	3	90	9	60	21	—
1st „	60	2	30	25	3	60	6	27	27	—	60	5	31	23	1
2nd „	71	—	5	65	1	71	—	8	63	—	71	6	61	4	—
2nd „	64	10	38	16	—	64	—	64	—	—	64	5	40	19	—
1st „	241	31	82	124	4	241	28	123	88	2	241	34	93	112	2
1st „	49	—	31	18	—	49	—	37	11	1	49	—	40	7	2
2nd „	211	16	61	128	6	211	18	56	133	4	211	20	87	104	—
1st „	58	—	40	18	—	58	1	46	11	—	58	8	37	13	—
1st „	15	—	7	7	1	15	—	5	10	—	15	—	4	10	1
1st „	33	1	22	8	2	33	2	25	6	—	33	—	22	11	—
2nd „	40	1	21	18	—	40	2	33	5	—	40	7	28	5	—

App. III.

Regiments.	Dictation.					Writing.					Arithmetic.			
	Books					Books					Books			
	Number of examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of examined.	Great Progress.	Progress.	Stationary.
23rd Foot, 2nd Batt.	132	25	29	78	—	132	22	33	77	—	132	26	25	81
24th „ 1st „	58	3	42	13	—	58	4	42	12	—	58	1	48	9
25th „ 1st „	72	1	26	41	4	77	2	36	39	—	78	1	26	36
27th Foot	27	1	24	2	—	27	—	13	13	1	27	2	17	8
28th „	111	6	39	57	9	111	3	62	45	1	111	6	39	31
29th „	72	—	30	42	—	72	—	29	43	—	72	2	36	34
30th „	101	13	46	42	—	101	16	49	36	—	101	19	52	30
31st „	11	—	10	1	—	32	—	20	12	—	32	2	18	12
32nd „	96	22	69	5	—	96	20	70	6	—	96	19	67	10
36th „	49	—	41	8	—	49	—	36	12	1	49	1	30	15
37th „	18	3	10	5	—	18	4	12	2	—	18	6	11	1
39th „	54	7	40	7	—	63	7	51	5	—	61	6	46	9
40th „	57	1	26	30	—	57	1	19	37	—	57	1	42	14
43rd „	33	—	21	12	—	33	—	29	4	—	33	—	29	4
44th „	123	—	33	86	4	123	1	33	87	2	123	6	65	51
46th „	53	6	42	4	1	53	5	37	10	1	53	7	30	14
48th „	127	15	92	20	—	149	27	101	21	—	149	29	95	24
51st „	107	—	41	66	—	107	—	51	53	3	107	3	51	53
52nd „	58	—	19	39	—	58	—	45	13	—	58	—	54	4
53rd „	130	8	72	50	—	130	10	84	35	1	130	19	75	32
54th „	127	3	64	60	—	127	1	87	39	—	127	9	64	54
55th „	53	—	47	6	—	55	1	41	13	—	52	2	43	6
59th „	91	3	50	32	6	178	8	123	46	1	92	6	42	31
60th Rifles, 4th Batt.	64	5	37	22	—	64	8	44	12	—	64	13	44	7
62nd Foot	33	—	28	5	—	33	—	28	5	—	33	1	23	8
63rd „	63	2	30	31	—	67	3	48	16	—	67	3	36	28
64th „	72	7	38	27	—	94	3	69	22	—	94	1	66	26
65th „	22	1	12	9	—	22	—	17	5	—	22	—	16	6
67th „	13	1	11	1	—	13	1	12	—	—	13	1	7	5
68th „	5	—	4	1	—	5	—	5	—	—	5	—	3	2
69th „	22	—	15	7	—	22	1	19	2	—	22	—	18	4
70th „	36	—	23	13	—	36	—	22	14	—	36	—	29	6
71st „	14	—	5	9	—	14	—	8	6	—	14	—	9	5
74th „	18	—	9	9	—	18	1	13	4	—	18	—	11	6
75th „	50	—	12	36	2	50	—	16	34	—	50	—	12	30
78th „	378	11	157	210	—	378	20	270	88	—	378	42	208	117
80th „	152	—	10	142	—	152	—	5	147	—	152	—	14	138
81st „	4	—	4	—	—	4	—	4	—	—	4	—	3	—
83rd „	62	2	32	20	8	62	2	32	20	8	62	1	32	21
84th „	100	—	9	88	3	100	1	17	82	—	100	—	9	88
85th „	89	1	6	72	10	89	—	30	56	3	89	—	9	73
86th „	125	16	34	71	4	125	22	30	70	3	125	24	30	63
87th „	132	20	37	75	—	132	22	40	70	—	132	10	29	93
89th „	68	1	52	15	—	68	—	58	10	—	68	—	57	11
91st „	47	—	30	17	—	47	—	32	15	—	47	2	34	10
92nd „	128	37	52	36	3	128	27	87	14	—	128	54	37	32
97th „	138	3	34	101	—	138	7	49	82	—	138	4	40	94
98th „	64	3	29	32	—	64	11	45	8	—	64	4	47	13
100th „	83	16	3	64	—	83	14	5	64	—	83	16	3	64
101st „	45	—	37	8	—	45	1	32	12	—	45	5	33	7
104th „	51	—	29	22	—	51	1	33	16	1	51	3	39	9
105th „	51	3	43	5	—	51	2	46	3	—	49	5	41	3
107th „	25	—	15	10	—	30	1	23	6	—	24	1	17	4
Rifle Brigade—														
1st Battalion	141	21	50	69	1	141	11	72	57	1	141	18	57	66
2nd „	73	3	53	15	2	73	—	31	34	8	73	5	55	13
4th „	122	25	34	63	—	122	23	34	65	—	122	25	25	72
Royal Canadian Rifles—														
Kingston	89	8	53	28	—	89	3	49	37	—	89	5	46	38
St. Johns	7	—	7	—	—	7	—	7	—	—	7	—	7	—
Cavalry Depôt	70	2	18	44	5	67	3	32	32	—	69	2	37	30
1st Depôt Battalion	138	7	68	43	—	136	9	87	40	—	139	20	87	32
2nd „	98	—	44	54	—	118	1	57	60	—	124	13	72	39
3rd „	110	—	18	90	2	115	1	40	73	1	115	2	53	58
4th „	58	8	27	23	—	59	8	34	16	1	60	6	34	20
5th „	118	9	41	68	—	118	9	61	48	—	118	15	49	54

Regiments.	Dictation.					Writing.					Arithmetic.				
	Books Number of examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Books Number of examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Books Number of examined.	Great Progress.	Progress.	Stationary.	Gone Back.
pôt Battalion -	42	1	12	28	1	49	2	27	18	2	50	3	23	23	1
„ -	163	12	52	96	3	163	7	62	93	1	163	7	51	103	2
„ -	60	—	26	33	1	60	2	23	34	1	60	1	23	36	—
„ -	60	—	6	54	—	60	—	5	55	—	60	—	5	52	3
„ -	44	—	24	20	—	44	1	32	11	—	44	8	27	9	—
„ -	332	8	109	215	—	332	11	179	141	1	332	12	121	196	3
„ -	314	2	87	224	1	314	—	75	238	1	314	20	171	118	5
„ -	248	8	39	201	—	248	9	31	208	—	248	9	32	205	2
„ -	159	6	21	132	—	115	6	19	85	1	71	5	14	51	1
„ -	170	27	96	46	1	170	24	122	24	—	170	36	69	64	1
ssariat Staff															
s—															
ershot - -	32	—	18	13	1	32	—	24	8	—	32	—	24	8	—
tley - -	22	2	8	12	—	22	3	12	7	—	22	8	7	7	—
escent Depôt—															
ssowlie - -	15	1	7	7	—	15	1	11	3	—	15	2	8	5	—
Horse Artillery—															
nares - -	17	—	9	8	—	19	—	11	8	—	19	—	10	9	—
idstone - -	49	1	24	24	—	76	1	32	43	—	50	—	40	3	7
olwich - -	64	4	35	25	2	64	—	50	14	—	64	5	43	15	1
Artillery—															
Brigade - -	32	—	30	2	—	32	—	29	3	—	32	—	31	1	—
„ —															
London, C.W. -	19	1	8	10	—	19	—	12	7	—	19	—	15	4	—
Toronto - -	42	15	24	3	—	42	13	25	4	—	42	17	23	2	—
n Brigade -	64	6	21	33	4	68	6	52	10	—	66	9	30	31	—
n „ -	64	9	27	28	—	64	12	31	21	—	64	9	30	25	—
n „ -	89	7	58	24	—	122	10	75	37	—	122	10	81	30	1
n „ -	65	—	32	33	—	65	—	47	18	—	65	6	45	14	—
h „ —															
Kingston - -	44	7	23	14	—	44	6	23	15	—	44	6	22	16	—
Montreal - -	46	6	9	31	—	46	8	10	28	—	46	10	8	28	—
Quebec - -	137	5	33	99	—	137	5	47	85	—	137	5	29	103	—
St. Helen's Island	29	—	2	27	—	29	—	7	22	—	29	—	9	20	—
h Brigade -	39	—	13	24	2	41	1	20	20	—	41	2	27	11	1
h „ -	148	25	32	101	—	148	17	43	88	—	148	19	22	107	—
h „ -	83	3	48	32	—	83	1	56	26	—	83	8	51	23	1
h „ -	40	2	31	7	—	40	—	35	5	—	40	—	32	8	—
h „ —															
Head Quarters -	10	—	3	7	—	10	—	4	6	—	10	—	3	7	—
F. Battery -	16	1	8	7	—	16	1	8	7	—	16	—	7	9	—
Brigade—															
Division - -	21	1	8	12	—	16	4	7	5	—	24	3	13	8	—
d „ - -	51	10	31	5	5	51	—	41	8	2	51	14	27	7	3
d „ - -	17	—	4	13	—	17	—	9	8	—	23	—	13	10	—
Artillery—															
ershot - -	113	3	77	33	—	113	—	96	17	—	113	5	99	9	—
blin - -	20	1	16	3	—	24	1	19	3	1	24	2	19	3	—
lsea - -	41	7	18	6	—	47	6	31	10	—	47	13	20	13	1
ith Fort - -	28	7	16	5	—	28	—	13	15	—	28	—	7	18	3
aker Heights -	9	—	3	6	—	9	1	8	—	—	9	—	5	4	—
Engineers—															
dershot - -	9	—	6	2	1	9	—	9	—	—	9	1		1	—
natham - -	8	1	6	1	—	8	2	5	1	—	8	2	4	2	—
braltar - -	19	—	6	9	4	19	—	6	13	—	19	—	7	9	3

APP. IV.
No. 1.

APPENDIX IV.—No. 1.

CERTIFICATES in possession of the several CORPS, 31st March 1868.

Regiment.	Station.	Number of Certificates in possession of Non-commissioned Officers and Men.			
		1st Class.	2nd Class.	3rd Class.	Total.
1st Life Guards	London	—	33	19	52
2nd „	Windsor	1	7	28	36
1st Dragoon Guards	Aldershot	—	1	—	1
3rd „	India	—	4	4	8
4th „	Aldershot	—	23	22	45
5th „	Colchester	2	2	14	18
6th „	Dublin	59	115	77	251
7th „	Shorncliffe	—	5	16	21
1st Dragoons	Longford	—	11	35	46
3rd Hussars	Hounslow	3	11	22	36
5th Lancers	India	—	41	4	45
6th Dragoons	York	1	—	—	1
7th Hussars	India	7	3	—	10
8th „	Manchester	—	—	6	6
10th „	Newbridge	—	—	8	8
12th Lancers	Dublin	3	16	21	40
13th Hussars	Canada	—	3	16	19
15th „	Norwich	—	—	6	6
16th Lancers	India	7	8	—	15
17th „	Brighton	—	—	3	3
Military Train	Aldershot	—	1	2	3
1st Batt. Gren. Guards	Windsor	1	16	40	57
3rd „ „	London	3	9	37	49
2nd „ Coldst. Grds.	Dublin	—	—	4	4
1st „ S. F. Guards	London	—	2	9	11
2nd Batt. 3rd Foot	Dublin	4	93	81	178
1st „ 4th „	Abyssinia	9	58	210	277
2nd „ 4th „	Nova Scotia	4	6	17	27
1st „ 5th „	India	4	7	—	11
2nd „ 5th „	Dover	24	10	83	117
1st „ 7th „	India	1	1	23	25
2nd „ 7th „	Bury	1	2	2	5
1st „ 8th „	Malta	3	11	9	23
2nd „ 8th „	Malta	7	60	119	186
1st „ 9th „	Cape	6	4	1	11
1st „ 10th „	Cape	1	15	9	25
2nd „ 11th „	Cape	12	45	66	123

Regiment.	Station.	Number of Certificates in possession of Non-commissioned Officers and Men.			
		1st Class.	2nd Class.	3rd Class.	Total.
1st Batt. 12th Foot	Devonport	1	1	3	5
2nd „ 12th „	India	4	16	26	46
1st „ 13th „	Gibraltar	1	1	5	7
2nd „ 13th „	Portland	3	13	50	66
1st „ 15th „	New Brunswick	—	6	4	10
2nd „ 15th „	Gibraltar	11	16	17	44
1st „ 16th „	Canada	3	21	31	55
2nd „ 16th „	Barbadoes	8	27	39	74
1st „ 17th „	Kilkenny	—	18	19	37
2nd „ 17th „	Canada	2	44	80	126
2nd „ 18th „	New Zealand	—	—	7	7
2nd „ 19th „	India	1	5	8	14
1st „ 20th „	Devonport	—	—	13	13
2nd „ 20th „	Natal	18	69	81	168
1st „ 21st „	Enniskillen	5	—	—	5
2nd „ 21st „	India	4	91	116	211
1st „ 22nd „	New Brunswick	—	39	65	104
2nd „ 22nd „	Newcastle-on-Tyne	5	41	103	149
1st „ 23rd „	India	3	6	7	16
2nd „ 23rd „	Newport	2	1	21	24
1st „ 24th „	Malta	—	40	99	139
2nd „ 24th „	Burmah	3	12	36	51
1st „ 25th „	Glasgow	3	2	5	10
26th Foot	India	13	59	111	183
27th „	Dover	11	15	6	32
28th „	Belfast	1	—	1	2
29th „	Canada	1	1	5	7
30th „	Canada	4	6	7	17
31st „	Malta	1	5	1	7
32nd „	Mauritius	5	13	—	18
33rd „	India	6	53	63	122
36th „	India	9	—	3	12
38th „	India	1	13	124	138
39th „	Dublin	12	5	26	43
40th „	Aldershot	1	2	21	24
42nd „	Stirling	12	65	5	82
43rd „	Aldershot	4	4	12	20
47th „	Nova Scotia	13	23	41	77
48th „	Fermoy	10	44	46	100
49th „	India	3	14	6	23
51st „	Aldershot	3	—	11	14
52nd „	Limerick	—	—	8	8
53rd „	Canada	1	3	16	20
55th „	India	1	10	6	17
57th „	Aldershot	1	2	—	3
58th „	India	5	6	7	18
59th „	Ceylon	6	16	29	51
1st Batt. 60th Rifles	Canada	7	12	65	84
3rd „ 60th „	India	16	—	—	16
4th „ 60th „	Canada	2	15	8	25
62nd Foot	Buttevant	—	—	16	16

App. IV.
No. 1.

Regiment.	Station.	Number of Certificates in possession of Non-commissioned Officers and Men.			
		1st Class.	2nd Class.	3rd Class.	Total.
63rd Foot - -	Dublin - - -	—	12	13	25
64th „ - -	Malta - - -	1	—	2	3
65th „ - -	Kinsale - - -	—	4	4	8
66th „ - -	Jersey - - -	—	2	7	9
68th „ - -	Aldershot - -	—	—	8	8
69th „ - -	Canada - - -	—	—	13	13
71st „ - -	Fermoy - - -	—	27	21	48
72nd „ - -	Dublin - - -	6	34	39	79
73rd „ - -	China - - -	—	—	15	15
74th „ - -	Dublin - - -	3	5	2	10
76th „ - -	India - - -	24	—	—	24
78th „ - -	Canada - - -	9	34	25	68
79th „ - -	India - - -	5	8	8	21
80th „ - -	Aldershot - -	—	11	8	19
81st „ - -	Cork - - -	—	6	27	33
83rd „ - -	Gibraltar - -	—	—	4	4
84th „ - -	Jamaica - - -	—	2	18	20
85th „ - -	Curragh - - -	2	2	4	8
86th „ - -	Mauritius - -	1	11	5	17
87th „ - -	Gibraltar - -	13	29	51	93
89th „ - -	Dublin - - -	1	4	18	23
90th „ - -	India - - -	1	4	44	49
92nd „ - -	Curragh - - -	19	47	36	102
94th „ - -	Dover - - -	—	2	8	10
95th „ - -	India - - -	9	38	46	93
98th „ - -	Portsmouth - -	—	—	3	3
99th „ - -	Cape - - -	1	2	1	4
102nd „ - -	India - - -	27	64	48	139
103rd „ - -	India - - -	7	86	35	128
105th „ - -	India - - -	1	7	71	79
106th „ - -	India - - -	8	47	103	158
1st Batt. Rifle Brigade	Canada - - -	1	42	17	60
2nd „ „ -	Devonport - -	1	—	—	1
4th „ „ -	Weedon - - -	3	5	1	9
Ceylon Rifles - -	Ceylon - - -	—	55	140	195
Cape Rifles - -	Cape - - -	—	—	19	19
1st Depôt Battalion -	Chatham - - -	19	54	100	173
2nd „ „ -	Chatham - - -	1	19	34	54
3rd „ „ -	Chatham - - -	—	—	1	1
4th „ „ -	Colchester - -	—	—	2	2
5th „ „ -	Parkhurst - -	6	5	5	16
6th „ „ -	Walmer - - -	—	2	8	10
7th „ „ -	Winchester - -	3	—	9	12
9th „ „ -	Preston - - -	4	7	10	21
10th „ „ -	Shorncliffe - -	—	8	11	19
11th „ „ -	Gosport - - -	3	2	2	7
12th „ „ -	Shorncliffe - -	—	2	10	12
13th „ „ -	Pembroke - -	3	4	1	8
14th „ „ -	Sheffield - - -	5	23	6	34
15th „ „ -	Aberdeen - -	2	11	25	38

APP. IV.
No. 1.

Regiment.	Station.	Number of Certificates in possession of Non-commissioned Officers and Men.			
		1st Class.	2nd Class.	3rd Class.	Total.
A. Brigade R. H. Artᵛ	India - - -	—	—	3	3
B. „ „ -	Woolwich - -	—	6	6	12
C. „ „ -	Aldershot - -	1	—	6	7
E. „ „ -	India - - -	2	21	21	44
F. „ „ -	India - - -	—	3	2	5
1st Brigade R. Artillery	Halifax, N.S. - -	18	—	—	18
3rd „ „ -	Canada - - -	16	32	21	69
4th „ „ -	Canada - - -	4	17	11	32
6th „ „ -	Portsmouth - -	14	10	18	42
7th „ „ -	Plymouth - -	9	60	46	115
9th „ „ -	Dublin - - -	4	50	79	133
10th „ „ -	Malta - - -	3	2	—	5
11th „ „ -	Shorncliffe - -	4	24	5	33
13th „ „ -	Dover - - -	2	29	93	124
14th „ „ -	India - - -	—	1	—	1
15th „ „ -	Gibraltar - -	5	4	1	10
17th „ „ -	Woolwich - -	—	3	5	8
22nd „ „ -	India - - -	3	9	10	22
Royal Artillery - -	Meean Meer - -	2	—	5	6
„ „ - -	Lucknow - - -	3	14	14	31
Depôt Brigade R. Artᵛ	Woolwich - -	5	1	4	10
Royal Engineers -	Chatham - - -	—	1	29	30
„ „ - -	Camden Fort - -	—	—	11	11

App. IV. No. 2.

Appendix IV.—No. 2.

ROYAL SCOTS GREYS.

Qualifications for Promotion.

Extract from Regimental Orders, 17th April 1868.

From Private to Lance Corporal.—To read the second school book, to write an easy passage dictated from the same, and in arithmetic to work simple multiplication.

To full Corporal.—A third-class certificate, to read easy narratives, to write fairly an easy passage dictated from the same, and to work in arithmetic the four compound rules and reduction of money.

To Serjeant.—A second-class certificate. To read a book of moderate difficulty, to write fairly a passage dictated from the same, to understand the mode of keeping the mess book, ledger, and savings bank accounts, and to work questions in practice, simple proportion, and interest.

To Troop Serjeant Major.—A first-class certificate. To read fluently any book of ordinary difficulty, to write correctly a passage dictated from the same, to understand the mode of keeping the mess book, ledger, savings bank accounts, to work vulgar and decimal fractions and compound proportion, and to have a fair knowledge of general geography and of English history.

N.B. Instead of the two latter subjects, any two of the following subjects may be taken: Algebra, mensuration, plain trigonometry, practical geometry, fortification, drawing, surveying, or chemistry.

An examination for certificates will take place in the second month of each quarter.

App. IV. No. 3.

APPENDIX IV.—No. 3.

26th Cameronians.

It having been found desirable that a new system of promotion be established in the regiment, the commanding officer requires all non-commissioned officers and privates, who may be desirous of promotion, to acquaint themselves with the following rules and regulations, which, while they improve the professional and educational status of the regiment, offer promotion to all persevering and industrious candidates.

Regulations of the Scheme of Promotion and Education in the 26th Cameronians.

1. Promotion in the ranks will depend upon conduct and character, efficiency in drill and regimental duty, and education.

2. A first special class will be established in the regiment for the purpose of improving the educational status of such men as are considered likely to become efficient non-commissioned officers. The selection for this class will comprise recommendations from officers commanding companies, of such men only as are desirous of obtaining promotion, who have at least 18 months' service, and are 6 months clear of the regimental defaulters' book. Men thus recommended will invariably parade before the commanding officer in the orderly room for approval, after which they may be allowed to attend school until required for promotion.

3. The men forming this class will attend school four days in the week, and, as a general rule, be exempt from all regimental duties, with the exception of guards, general parades, and one commanding officer's parade weekly.

4. A second special class will also be established for the purpose of gradually educating all the men of the regiment up to a certain standard. To effect this officers commanding companies, selecting the best scholars first, will order the attendance at school of the regulated number of men until they obtain third-class certificates.

5. The men forming this class will attend school four days in the week, and, as a general rule, be exempt from all regimental duties, with the exception of guards, and one parade daily.

6. Special class men will mount the same number of guards as other men, provided that this number does not exceed one guard weekly. This duty will be performed on the regulated days, when there is no school for adults.

7. Special class men will be removed if considered unteachable, or for medical reasons if recommended by the officer in medical charge of the regiment.

8. From eligible certificated men, first special class men if there be any so qualified, all lance corporals will be selected.

9. When there is a vacancy for a lance corporal in a company and it has no eligible man in possession of a certificate, the first special class men of that company will be examined by the schoolmaster, and if the first on the list be in other respects eligible he will receive the promotion.

10. In order to be qualified for the rank of corporal a lance corporal must know his duty as orderly corporal, and be able to make out a correct duty state of his company. He must know the manual, platoon, and bayonet exercise, be able to command a guard, and have a fair knowledge of company drill. He must be in possession of a third-class school certificate, which comprises—

Reading :—Easy narratives and regimental orders.
Dictation :—From the same.
Arithmetic :—Four compound rules and reduction.

11. For promotion to the rank of sergeant a corporal must thoroughly understand his duty as orderly sergeant, and the interior economy of his company. He must be qualified to take command of his company in all the movements of company drill, must know his place as coverer in each battalion movement, and thoroughly understand the instruction of musketry, including all the cautions in position drill. He must also be in possession of a second-class school certificate, which comprises—

Reading :—Books of moderate difficulty and regimental orders.
Dictation :—From the same.
Arithmetic :—Practice, proportion, interest, and a thorough acquaintance with the mode of keeping a mess book, ledger, and savings' bank accounts.

App. IV. No. 3.

12. For promotion to the rank of a colour sergeant a sergeant should be in possession of a first-class school certificate, which comprises—

Reading :—Books of ordinary difficulty and regimental orders.
Dictation :—From the same.
Arithmetic :—Fractions and preceding rules.
Geography } A fair knowledge or these or other two subjects ac-
History } cording to the authorized syllabus.

13. Before a non-commissioned officer is promoted the adjutant will certify that he is practically qualified to discharge the duties required of him.

14. To afford candidates constant opportunities of obtaining educational certificates the schoolmaster will hold an examination on the first Monday of every month in the presence of an officer not below the rank of captain.

15. In order that those who fail at examinations may not be discouraged seniors who may pass after juniors will take their proper place among the successful but unpromoted candidates.

Shurlock Henning, Lieut.-Colonel,
Commanding 26th Cameronians.

Camp, Belgaum,
6th December 1865.

App. IV. No. 4.

Appendix IV.—No. 4.

Special Classes in the Bombay Presidency.

(*Extracts from Lieutenant Jacob's Report.*)

Special Classes.

In order to enable me to give full information as to the working of the special class system in the regiments of this presidency, I called for a return from each corps showing the number of men who had attended the class during the nine months ending 31st December 1866, the progress they had made, and the number who had received promotion, and at the same time invited each commanding officer to give his opinion on the working of the scheme in his own corps. The information thus gathered, together with the result of my examination of each class, I will now lay before you. I would first remark, however, that many of these, though termed special classes, are not formed in accordance with the system proposed by the Council, and their only speciality consists in their attending somewhat more regularly than the ordinary classes.

E. Brigade, Royal Horse Artillery.

The number of men on the roll of the special class on 1st April 1866 was 12. From that time up to the end of the year 9 more joined. During the year 14 left the class. None of those who left had received any promotion. The attendance of these men had not been regular. All of them, however, had improved very much, and although the attainments of all on joining were very low, when they left 4 were said to have been qualified for a first, 4 for a second, and 5 for a third class certificate. The commanding officer offered no remarks upon the system.

When I examined the class in October 1866 nine men were present. They read pretty well, and most of them could work addition of decimals, interest, and compound proportion. They also knew a very little geography. None of these could have reached the standard required for a first-class certificate.

Head Quarters, 14th Brigade, Royal Artillery.

The special class in this school was formed on the 22d May 1866. Two bombardiers, a gunner, and a driver joined it. One bombardier left the class on the 14th November to act as barrack-sergeant and is now battery schoolmaster. He has been promoted to corporal. The other returned to duty at his own request on the 4th July. The gunner was appointed assistant master on the 11th May, and the driver was promoted to acting bombardier on the 30th November when the course terminated. One sergeant and six men joined on 13th December and were in the class at the end of the year. Colonel Domville's remarks were as follows: "The best results may be hoped for by the establishment of these "special classes, more particularly if the hopes of employment of the "men attending them in the Government departments are fulfilled."

When I examined the class in January 1867 only 4 men were present. They did not read well, had no knowledge of grammar, could work compound rules of arithmetic, and wrote fairly from dictation.

Head Quarters, 18th Brigade, Royal Artillery.

A special class was formed in this Brigade on the 1st April 1866, and consisted of 7 non-commissioned officers and 6 men, but owing to the very heavy duty which fell to the men the class was closed on the 30th June. Of course during this very short period no material progress could be expected, but out of the 7 non-commissioned officers 2 have been transferred to the Ordnance Department, and 2 of them have been promoted. One of the gunners also has received promotion. When the annual drafts of men arrived the class was revived on the 1st January 1867, and was composed entirely of gunners and drivers. "At first the "number of candidates offering themselves was very great, but when it "was given out that men who joined would only be exempted from "fatigues, instead of fatigues, ordinary drill, and stables, the numbers "decreased, and a class of 8 was formed, the strength at which it now "stands."

The commanding officer's opinion of the system is as follows: "I "cannot speak too highly of this system of instruction; it causes emu- "lation, and shows the men the necessity of education, without which "advancement is unattainable."

Royal Artillery, Aden.

A special class exists in the Artillery School at Aden, but the commanding officer reports on it as follows: "Owing to the change of "quarters between the batteries every two months from cantonments to "Steamer Point and back, and the fact of there being no schoolmaster "at the latter locality, the progress of the men has not been satisfactory." The class appears to have consisted of 1 corporal and 6 men. The corporal has been promoted to sergeant, one gunner to bombardier, and one to acting bombardier.

Her Majesty's 3rd Dragoons.

On the 1st April there were in the special class of this corps 18 non-commissioned officers and 5 men, and 3 of the former and 9 of the

App. IV. No. 4.

latter joined during the year. Seven non-commissioned officers left the class during the same period, two having been invalided, four reduced, and one appointed sergeant cook. The promotion given to members of the class was as follows :—

4 privates	promoted to	lance corporals.
5 lance corporals	„	corporals.
7 corporals	„	lance sergeants.
2 lance sergeants	„	sergeants.

The commanding officer says, "I am of opinion that the class has "been most beneficial to the regiment, and Schoolmaster Spong has given "the men every encouragement to improve themselves." I inspected the class in March 1867, there were 24 present. They had not taken up anything beyond arithmetic, reading, and writing. They were attending 2 hours a day. The 1st class wrote well from dictation, read very well, and could work reduction of money, and simple interest. The 2nd and 3rd classes read tolerably and could work a little arithmetic.

1st Battalion, 4th King's own Royal Regiment.

In the special class of this regiment there were 19 men on the 1st April. Up to July, 25 men had joined. Four left in April and May, and in July 18 more were removed from the class as unfit for it. The class was then re-formed and continued until November, when the change of detachments again caused it to be dissolved. During those eight months eight men of the class received promotion, and one was appointed a clerk in the Pay Office.

Colonel Wilby remarked thus, "The attendants at the special class "have shown interest in their studies, and have generally made good "progress, and I consider its working up to the present time has been "satisfactory."

I examined the class in November 1866. It consisted of 3 divisions. The two lower divisions were composed of men of good conduct and likely to be promoted, but of low educational attainments. None of them could read well, some hardly at all. They could work a little arithmetic. There were only 4 men in the 1st division, and it had consequently been amalgamated with the first of the ordinary classes. Their powers of writing from dictation and of working arithmetic were very small, but they read well and thoroughly understood the theory of tides, rain, wind, &c., and a few of them knew the parts of speech.

Her Majesty's 26th Cameronians.

There are in this regiment two special classes, each having a different object. What these objects are will be found fully detailed in Appendix B.

The number of men in the 1st special class during the last nine months of 1866 was 36, all of whom appear to have left it. The promotion given was as follows :—

Promoted to	staff sergeant -	- 1
„	sergeant -	- 2
„	corporal -	- 3
„	lance corporals	- 15
		21

Regarding this class Colonel Henning writes, "I consider the working "of the special class system in the Cameronians excellent, but I attribute "this entirely to my scheme of promotion and education, according to

" which promotion is dependent to a certain extent on education. " Previous to the organization of this scheme the special class system " was a decided failure in the regiment."

The number of men in the 2d special class during the same period was 37. Thirty of these left for the following reasons:

On account of promotion	9
After receiving 3rd class certificates	6
Transferred to 1st special class	15
	30

The commanding officer's remarks on this class are as follows, "In " my opinion the 2d special class system as carried on in my regiment " is the only way of effectually educating the mass up to a certain standard, " while it acts as a constant 'feeder' to the 1st special class."

I examined these two classes in December 1867, the result was as follows:

1st and 2nd divisions. 8 men (only 1 of 1st division). These men read pretty well, but it was unfortunate that the first division was not more strongly represented. Their knowledge of Indian history and of elementary geography was very good. Those of the 2nd division worked correctly 6¾ of the 8 sums in arithmetic which were given, the man of the 1st division worked all that were given him. Their dictation papers were *very bad*.

3rd Division, 15 men.

This class read fairly, worked arithmetic well, and had begun to learn history and geography. Their dictation papers were also bad.

4th Division, 13 men.

The men of this division read from an easy book very creditably. Seven of them could neither read nor write when they joined the special class. They worked the four first rules of arithmetic very well.

5th Division, 9 men.

These 9 men read very fairly from the 2d book, a fact which redounds very much to their credit considering that on joining the special class four of them could not read at all, and three could only read a little.

6th Division, 10 men.

These men were learning to read. Some of them could write fairly on slates.

Her Majesty's 33rd Regiment.

The special class of this regiment was broken up on the 31st October 1866, and a new one formed in the following January after the regiment's arrival at Kurrachee. During the nine months previous to its being broken up 53 men joined the class, 21 of whom left prior to the 1st October. Of these 9 received promotion. The number of 2nd class school certificates awarded to the class was ten, and of the 3rd class fourteen. The attendance was not by any means regular. The total number of days on which they might have attended during the nine months was 167, yet the average was only 84 days, or half the number.

In Colonel Collings' opinion "the special class works very satis- " factorily."

The special classmen in this regiment were mixed up with the ordinary classes, and therefore the remarks which I made on the latter may be considered to apply to the former. The number of men shown in the ordinary classes is exclusive of the special class men.

App. IV. No. 4.

Her Majesty's 45th Regiment.

The results of the special class in this regiment during the last nine months of 1866 were as follows:

Number of men admitted to the class	158
Number of men promoted	41
Average number on books monthly	39
Average monthly attendance	25
„ daily „	28
Number who left the class	119

Colonel Parish writes, "With regard to the progress of the class the "schoolmaster's report is satisfactory. Seven men distinguished themselves and deserve great credit for their assiduity to obtain the little "learning they now possess. On their admission a few months ago "they could neither read nor write, but now they are able to read fairly, "write from dictation fairly, and work first four rules of arithmetic well. "Two have been promoted. As a contrast to these men the schoolmaster reports that in the lower class of the ordinary school there are "many men who have for years been poring over the alphabet and the "spelling of the simplest syllables."

Here too the men of the special class were mixed up with other classes, so there is nothing further to report on them. They are, however, instructed separately, daily from 10½ to 12, except on Tuesday and Wednesday, when the hours are from 3 to 4 p.m.

Her Majesty's 95th Regiment.

The return of the special class received from this regiment shows the following results:

On the 1st January 1866 there appear to have been 11 lance corporals in the class, one of whom was dismissed for misconduct in April, whilst the other ten remained till June. Before joining, 9 of these had received a 3rd class certificate, and before leaving 4 had reached the standard required for a 1st, and 5 that for a 2nd class certificate. The other two who were below the lowest standard became qualified for a 3rd class certificate. In July, 22 more were admitted, 4 of whom were subsequently dismissed for misconduct, 2 were promoted to the rank of corporal, and 3 more left from other reasons. Colonel Vialls writes, "I consider the special class system admirably calculated to promote adult education in the army. The men who have undergone "such a course in the school of this regiment have benefited in a degree "far beyond what would have accrued to them under the ordinary system "of school attendance."

No report has been received from the G/14 Royal Artillery, but at my inspection of the school I was informed that the special class had been first formed in August 1866. At that time it contained 17 non-commissioned officers and 10 gunners. Twelve of the former and five of the latter were present. They read pretty well and knew the meaning of the difficult words. They were also acquainted with European geography. Some worked fractional arithmetic, others interest. They wrote from dictation badly. The spelling of the non-commissioned officers was very bad.

The other schools inspected had no special class.

Appendix V.

TABLE marking Degrees of Progress as shown by Examination Books in the Grown Children's Schools from Assistant Inspectors' and Superintending Schoolmasters' Reports, 1867.

Regiments.	Dictation.				Writing.				Arithmetic.			
	Number of Books examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of Books examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of Books examined.	Great Progress.	Progress.	Stationary.	Gone Back.
st Life Guards	34	3	20	11	—	34	4	24	6	—	34	3	18	13	—
nd „	24	2	17	5	—	26	2	19	5	—	27	5	12	10	—
oyal Horse Guards	16	5	10	1	—	18	5	13	—	—	18	1	10	7	—
st Dragoon Guards	22	—	16	6	—	22	2	17	3	—	22	2	15	5	—
h „	32	6	22	4	—	34	2	31	1	—	34	2	21	10	—
h „	20	5	8	7	—	20	5	12	3	—	20	5	14	1	—
h „	6	—	6	—	—	6	—	5	1	—	6	—	6	—	—
h „	6	2	3	1	—	6	1	3	1	1	6	—	6	—	—
t Dragoons	22	—	17	5	—	22	—	22	—	—	22	—	22	—	—
nd „	20	—	18	2	—	20	1	18	1	—	20	2	17	1	—
rd Hussars	46	—	26	20	—	46	—	39	7	—	46	—	24	22	—
h Lancers	8	3	5	—	—	8	1	7	—	—	8	3	2	3	—
h Dragoons	17	2	7	7	1	17	—	10	6	1	17	1	15	1	—
h Hussars	17	—	12	5	—	17	—	15	2	—	17	—	16	1	—
h Lancers	16	—	15	1	—	16	—	16	—	—	16	—	16	—	—
th Hussars	39	—	2	36	1	39	1	24	14	—	39	—	6	31	2
th Lancers	7	4	3	—	—	7	7	—	—	—	7	4	3	—	—
8th Hussars	8	1	—	7	—	8	1	5	2	—	8	1	5	2	—
8th „	6	—	5	1	—	6	—	4	2	—	6	—	1	3	2
9th „	10	—	9	1	—	13	—	10	3	—	13	—	10	3	—
7th Lancers	9	—	6	3	—	9	—	5	4	—	9	—	5	4	—
Military Train—															
Aldershot	33	—	23	10	—	33	—	31	2	—	33	4	26	3	—
Woolwich	8	1	3	2	—	6	—	6	—	—	6	—	4	2	—
Grenadier Guards—															
1st Battalion	20	—	14	6	—	20	1	8	11	—	20	1	14	5	—
2nd „	9	1	5	3	—	13	—	6	7	—	13	—	3	10	—
3rd „	14	3	9	1	1	18	3	11	4	—	22	4	11	7	—
Coldstream Guards—															
1st Battalion	23	1	15	7	—	23	2	11	9	1	23	—	6	17	—
2nd „	14	5	9	—	—	29	3	21	5	—	18	5	13	—	—
Scots Fusilier Guards—															
1st Battalion	14	5	8	1	—	14	3	9	2	—	14	1	7	6	—
2nd „	20	3	9	8	—	20	—	17	3	—	20	3	17	—	—
nd Foot, 2nd Batt.	3	1	1	1	—	3	—	2	1	—	3	—	3	—	—
h „ 2nd „	22	4	12	6	—	22	8	14	—	—	22	1	20	1	—
h „ 1st „	12	1	6	5	—	12	—	9	3	—	12	—	10	2	—
h „ 2nd „	22	5	16	1	—	22	—	9	3	—	12	—	10	2	—
h „ 1st „	9	—	6	3	—	9	2	6	1	—	9	2	1	6	—
„ 2nd „	38	5	14	19	—	38	3	23	12	—	38	5	24	8	1
th „ 1st „	32	—	18	14	—	35	10	18	17	—	35	—	21	11	3
„ 2nd „	5	—	4	1	—	5	—	5	—	—	5	1	—	4	—
th „ 1st „	4	3	—	1	—	4	2	2	—	—	4	2	2	—	—
„ 2nd „	29	—	15	14	—	29	1	14	14	—	29	2	17	10	—
th „ 2nd „	53	10	40	2	1	53	6	42	4	1	53	3	43	6	1
th „ 1st „	24	7	15	2	—	24	7	15	2	—	24	8	15	1	—
th „ 1st „	15	—	11	4	—	15	—	14	1	—	15	—	14	1	—
„ 2nd „	43	9	18	16	—	43	10	26	7	—	43	6	34	3	—
th „ 1st „	24	—	20	4	—	24	1	23	—	—	24	—	20	4	—
st „ 1st „	10	1	4	4	1	10	2	6	2	—	10	3	6	1	—

App. V.

Regiments.	Dictation.				Writing.				Arithmetic.			
	Number of Books examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of Books examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of Books examined.	Great Progress.	Progress.	Stationary.	Gone Back.
22nd Foot, 2nd Batt.	15	—	—	15	—	15	—	—	15	—	15	—	—	15	—
23rd „ 2nd „	14	1	13	—	—	14	1	13	—	—	14	—	14	—	—
24th „ 1st „	4	1	2	1	—	9	—	7	2	—	10	—	7	3	—
25th „ 1st „	16	—	6	6	4	16	—	12	4	—	16	—	6	6	4
28th Foot	14	2	7	5	—	14	2	9	3	—	14	1	9	3	1
29th „	7	—	4	3	—	7	—	4	3	—	7	—	5	1	1
30th „	20	6	14	—	—	20	6	14	—	—	20	8	12	—	—
31st „	2	—	2	—	—	2	—	2	—	—	2	—	2	—	—
32nd „	10	5	5	—	—	10	—	10	—	—	10	—	9	1	—
36th „	4	—	3	1	—	4	—	3	1	—	4	2	2	—	—
37th „	8	1	7	—	—	8	1	7	—	—	8	—	8	—	—
39th „	28	5	23	—	—	34	13	21	—	—	34	8	25	1	—
40th „	22	—	6	16	—	22	—	14	8	—	22	1	16	5	—
43rd „	18	—	12	6	—	18	—	17	1	—	18	—	17	1	—
44th „	11	1	5	5	—	11	2	6	3	—	11	3	7	1	—
46th „	8	1	4	3	—	8	—	7	1	—	8	—	2	4	2
48th „	7	5	2	—	—	10	5	5	—	—	10	6	4	—	—
51st „	29	5	20	4	—	29	4	22	3	—	29	15	13	1	—
52nd „	21	—	10	11	—	21	—	18	3	—	21	1	15	5	—
53rd „	7	2	2	3	—	7	1	3	3	—	7	—	5	2	—
54th „	16	1	6	9	—	16	—	15	1	—	16	—	7	9	—
55th „	8	—	8	—	—	8	—	8	—	—	8	—	6	2	—
56th „	11	—	9	2	—	11	—	9	2	—	11	—	2	7	2
57th „	5	—	2	2	1	5	—	2	2	1	5	—	2	2	1
59th „	28	1	18	6	3	41	5	34	2	—	36	1	21	11	3
60th Rifles, 4th Batt.	12	—	9	3	—	12	—	11	1	—	12	—	9	3	—
62nd Foot	28	3	14	11	—	28	2	26	—	—	28	2	22	4	—
63rd „	24	10	12	2	—	28	13	14	1	—	28	13	14	1	—
64th „	25	17	8	—	—	29	8	21	—	—	29	4	22	3	—
65th „	7	—	5	2	—	7	—	7	—	—	7	—	6	1	—
67th „	4	—	4	—	—	4	—	4	—	—	4	—	2	2	—
68th „	11	—	11	—	—	11	—	11	—	—	11	—	6	5	—
69th „	28	—	23	5	—	28	2	26	—	—	28	1	23	4	—
70th „	11	2	9	—	—	11	2	9	—	—	11	2	8	1	—
71st „	9	—	6	3	—	9	—	7	2	—	9	—	9	—	—
74th „	9	6	1	2	—	9	6	2	1	—	9	—	7	2	—
78th „	19	8	10	1	—	19	8	10	1	—	19	9	8	2	—
80th „	11	—	—	11	—	11	—	—	11	—	11	—	1	10	—
81st „	10	—	7	3	—	10	—	8	2	—	10	—	7	3	—
84th „	11	—	1	10	—	11	—	5	6	—	11	—	1	10	—
85th „	18	—	2	15	1	18	—	12	6	—	18	—	2	12	4
86th „	15	7	4	4	—	15	5	9	1	—	15	7	6	2	—
87th „	33	1	22	10	—	33	1	22	10	—	33	—	24	9	—
89th „	37	—	26	11	—	37	—	37	—	—	37	1	36	—	—
91st „	18	—	11	7	—	18	1	10	7	—	18	2	13	3	—
92nd „	25	15	9	1	—	25	14	10	1	—	25	16	8	1	—
97th „	25	2	8	14	1	25	3	15	7	—	36	8	28	—	—
98th „	36	15	6	15	—	36	11	25	—	—	36	8	28	—	—
100th „	5	2	3	—	—	5	1	4	—	—	5	1	4	—	—
101st „	13	—	13	—	—	13	3	8	2	—	13	1	12	—	—
104th „	22	—	17	5	—	22	2	7	13	—	22	—	20	2	—
105th „	14	1	11	2	—	14	1	9	4	—	14	3	11	—	—
107th „	6	1	3	2	—	6	2	3	1	—	6	1	3	1	1
Rifle Brigade—															
1st Battalion	8	7	1	—	—	8	6	2	—	—	8	7	1	—	—
2nd „	3	—	3	—	—	3	—	2	1	—	3	—	3	—	—
4th „	11	3	8	—	—	11	3	8	—	—	11	3	8	—	—
Royal Canadian Rifles—															
Kingston	103	5	97	1	—	103	7	95	1	—	103	3	99	1	—
St. John's	49	10	39	—	—	49	14	35	—	—	49	2	47	—	—
Chambly	34	6	24	4	—	34	7	24	3	—	34	1	29	4	—
Isle aux Noix	42	—	42	—	—	42	—	42	—	—	42	—	42	—	—
Naval Cottages	39	3	34	2	—	39	3	34	2	—	39	—	37	2	—
Cavalry Depôt	58	2	20	36	—	65	4	38	22	1	66	11	35	20	—
1st Depôt Battalion	28	3	18	7	—	28	3	21	4	—	29	10	18	1	—
2nd „	26	4	15	7	—	35	6	19	10	—	35	8	11	16	—
3rd „	18	2	14	2	—	28	2	12	14	—	28	1	14	13	—
4th „	37	3	18	15	1	36	4	21	10	1	37	5	19	13	—

Regiments.	Dictation.				Writing.				Arithmetic.			
	Number of Books examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of Books examined.	Great Progress.	Progress.	Stationary.	Gone Back.	Number of Books examined.	Great Progress.	Progress.	Stationary.	Gone Back.
5th Depôt Battalion	50	10	30	10	—	50	13	35	2	—	50	20	22	8	—
6th „	16	—	12	4	—	27	3	15	9	—	27	1	18	8	—
7th „	44	7	23	14	—	44	8	27	9	—	44	2	30	11	1
8th „	20	1	15	4	—	20	5	14	1	—	20	1	10	7	2
9th „	38	7	21	10	—	38	4	32	2	—	38	3	23	12	1
10th „	41	6	30	5	—	46	9	37	—	—	46	—	23	22	1
11th „	32	2	11	19	—	32	—	23	9	—	32	1	14	17	—
12th „	40	5	13	22	—	40	3	22	15	—	40	5	30	5	—
13th „	69	16	26	27	—	69	12	27	30	—	69	6	30	32	1
14th „	18	2	11	5	—	27	4	13	10	—	26	1	14	11	—
15th „	34	13	21	—	—	34	13	21	—	—	34	12	22	—	—
Commissariat Staff Corps, Aldershot	35	11	22	2	—	35	12	23	—	—	35	3	20	2	—
Netley	50	12	12	26	—	50	8	26	16	—	50	12	17	21	—
Sandhurst	31	1	9	21	—	33	2	25	6	—	31	—	15	16	—
Invalid Battalion, Chunar	10	1	6	3	—	10	2	4	3	1	10	2	6	2	—
Royal Horse Artillery—															
Benares	2	—	2	—	—	2	—	1	1	—	2	—	—	2	—
Maidstone	13	1	9	3	—	19	1	14	4	—	20	1	10	9	—
Woolwich	138	21	80	27	10	138	5	118	5	—	138	23	82	25	8
Royal Artillery—															
1st Brigade	39	6	9	15	—	42	34	8	—	—	26	6	10	10	—
4th „															
London, C.W.	5	—	2	3	—	5	1	1	3	—	5	—	4	1	—
Toronto	23	6	16	1	—	23	6	16	1	—	23	5	17	1	—
Hochelaga	8	—	1	7	—	8	—	3	5	—	8	—	1	7	—
5th Brigade	64	6	21	33	4	68	6	52	10	—	66	9	30	27	—
6th „	50	14	24	12	—	50	13	32	5	—	50	13	22	15	—
7th „	33	2	24	7	—	39	—	34	5	—	39	1	36	2	—
9th „	38	7	21	10	—	38	4	32	2	—	38	3	23	12	—
10th „															
Kingston	23	6	17	—	—	23	10	13	—	—	23	6	17	—	—
Montreal	27	6	21	—	—	27	6	21	—	—	27	5	22	—	—
Quebec	24	5	18	1	—	24	6	17	1	—	24	1	21	2	—
St. Helen's Island	9	—	6	3	—	9	—	6	3	—	9	—	7	2	—
11th Brigade, Head Quarters	26	1	14	10	1	32	2	23	7	—	32	6	20	6	—
F. Battery	4	3	—	1	—	4	2	1	1	—	4	2	2	—	—
12th Brigade	41	15	10	16	—	41	11	23	7	—	41	7	17	17	—
13th „	46	7	26	13	—	46	5	39	2	—	46	12	25	8	1
15th „	32	—	24	8	—	32	—	25	7	—	32	2	25	5	—
Depôt Brigade—															
1st Division	46	12	27	6	1	43	18	19	6	—	46	6	22	18	—
2nd „	134	31	86	11	6	136	—	131	3	2	134	20	77	32	5
3rd „	34	—	11	23	—	34	1	19	14	—	34	—	9	23	2
Detached Batteries—															
Aldershot	44	2	34	8	—	44	2	39	3	—	44	3	36	5	—
Dublin	16	—	14	2	—	23	1	21	1	—	23	1	21	1	—
Hilsea	6	1	3	2	—	12	1	10	1	—	10	—	2	8	—
Leith Fort	28	1	13	13	1	28	—	17	10	1	28	2	14	12	—
Maker Heights	21	—	5	16	—	21	1	7	13	—	21	—	6	15	—
Shoeburyness	25	2	12	9	1	23	1	13	8	1	24	2	14	7	1
Royal Engineers—															
Aldershot	23	—	9	14	—	23	—	21	2	—	23	—	16	4	3
Chatham	38	2	22	14	—	43	7	25	11	—	43	2	20	21	—
Gibraltar	20	2	13	4	1	20	—	16	4	—	20	—	11	9	—

Appendix VI.—No. 1.

Examination of the 1st Division of Students, Normal School, Royal Military Asylum, in June 1866.

Order of Merit.	Name.	Index Number.	Arithmetic.	Algebra.	Euclid.	Logarithms and Trigonometry.	Mechanics.	Total.	Scripture History.	English Grammar.	Geography.	History.		Penmanship.	Reading.	Chemistry.	Drawing.	Fortification.	Vocal Music.	Total.	Remarks.
												English.	Indian and Colonial.								
	Maximum -	—	110	80	80	80	80	430	110	100	110	130	60	75	100	150	80	75	80	1500	
	Minimum -	—																		·750	
1	Hill, Wm. J. -	16	105	54	67	76	80	382	96	90	90	110	50	53	80	140	57	73	80	1301	Pupil Teacher, Royal Military Asylum.
2	Lacey, John -	12	96	56	57	70	60	339	105	75	90	100	50	65	75	75	40	62	50	1126	Sergeant, 69th Foot.
3	Raymer, Robt. -	14	90	49	52	34	71	296	85	70	100	80	40	60	80	100	53	69	78	1111	Civilian.
4	Spiller, Thos. -	11	79	37	51	32	62	261	82	70	70	80	45	57	60	105	70	73	70	1043	Corporal, Royal Artillery.
5	Ovens, Hugh -	19	93	47	39	38	40	257	106	85	80	100	45	56	60	60	48	58	60	1015	Pupil Teacher, Royal Military Asylum.
6	Halfpenny, Wm.	17	82	49	39	38	57	265	56	80	65	100	50	62	70	55	50	58	75	986	4th Class, Schoolmaster.
7	Marshall, John	20	104	47	52	43	48	294	92	65	65	90	40	37	55	70	45	59	60	972	Pupil Teacher, Royal Military Asylum.
8	M'Cormick, Jas.	18	76	36	68	23	23	226	43	75	95	110	55	70	50	25	50	63	65	927	4th Class Schoolmaster.
9	Bacon, Wm. -	13	88	50	42	37	54	271	82	60	65	70	35	32	50	90	55	55	60	925	Corporal, 69th Foot.
10	Kearns, Jas. W.	15	83	45	38	31	36	233	71	60	70	70	25	57	50	70	73	71	70	920	Pupil Teacher, R.M.A.

Appendix VI.—No. 1.

Examination of the 1st Division of Students, Normal School, Royal Military Asylum, in December 1866.

Order of Merit.	Name.	Index Number.	Arithmetic.	Algebra.	Euclid.	Logarithms and Trigonometry.	Mechanics.	Total.	Scripture History.	English Grammar.	Geography.	History.		Penmanship.	Reading.	Chemistry.	Drawing.	Fortification.	Vocal Music.	Total.	Remarks.
												English.	Indian and Colonial.								
	Maximum -	—	110	80	80	80	80	430	110	100	110	130	60	75	100	150	80	75	80	1500	
	Minimum -	—																		750	
1	Myatt, Chas. W.	20	102	75	80	75	77	409	94	88	80	101	49	50	85	120	45	75	70	1266	Pupil Teacher, Royal Military Asylum.
2	Henry, John -	12	68	71	63	59	58	319	87	80	90	110	53	45	55	115	40	61	70	1125	Private, 89th Foot.
3	Shields, John -	18	81	61	59	63	46	310	94	76	75	71	49	30	80	115	25	67	60	1052	Civilian.
4	Dunnett, Geo. L.	17	68	53	50	40	43	254	77	88	100	56	23	30	85	135	80	63	58	1049	Private, 5th Dragoon Guards.
5	French, John -	13	101	51	73	40	54	319	75	60	100	90	46	50	55	60	60	57	75	1047	4th Class, Schoolmaster.
6	Douthett, Alex.	16	82	58	55	39	42	276	80	56	90	60	43	30	90	95	50	62	65	997	Pupil Teacher, Royal Military Asylum.
7	Reilly, John C. -	14	81	65	66	55	60	327	75	84	60	40	21	60	80	45	40	59	63	954	Pupil Teacher, Royal Hibern. Mil. Schl.
8	Payne, Wm. S. -	11	84	36	41	15	47	223	62	64	80	71	20	35	90	50	55	46	80	876	Pupil Teacher, Royal Military Asylum.
9	Holloway, James	19	101	53	41	35	34	264	60	40	60	56	25	60	75	45	58	70	50	863	4th Class, Schoolmaster.
10	Aldwell, William	15	88	37	59	37	32	253	54	60	60	45	25	50	80	65	37	49	78	861	Ditto.

Appendix VI.—No. 1.

Examination of the 1st Division of Students, Normal School, Royal Military Asylum, in June 1867.

Order of Merit.	Name.	Index Number.	Arithmetic.	Algebra.	Euclid.	Logarithms and Trigonometry.	Mechanics.	Total.	Scripture History.	English Grammar.	Geography.	History.		Penmanship.	Reading.	Chemistry.	Drawing.	Fortification.	Vocal Music.	Total.	Remarks.
												English.	Indian and Colonial.								
	Maximum -	—	110	80	80	80	80	430	110	100	110	130	60	75	100	150	80	75	80	1500	
	Minimum -	—																		750	
1	Williams, H. B.	11	102	78	64	56	38	338	105	85	90	100	50	65	85	110	55	71	65	1219	Corporal, 44th Foot.
2	Preston, Walter	12	88	70	70	34	19	281	94	80	100	110	55	55	60	140	60	68	70	1173	Corporal, 63rd Foot.
3	Marshall, Chas.	14	90	67	50	40	36	283	62	70	80	90	40	60	85	100	45	61	70	1046	Lance Sergeant, 32nd Foot.
4	Stewart, Charles	13	95	75	63	55	15	303	84	70	75	80	45	40	35	70	50	37	65	954	Civilian.
5	Docherty, Thos.	15	98	58	39	36	6	237	84	80	95	100	45	50	70	40	35	56	50	942	Pupil Teacher, Royal Hib. Mil. School.

Appendix VI.—No. 1.

Examination of the 1st Division of Students, Normal School, Royal Military Asylum, in December 1867.

Order of Merit.	Name.	Index Number.	Arithmetic.	Algebra.	Euclid.	Logarithms and Trigonometry.	Mechanics.	Total.	Scripture History.	English Grammar.	Geography.	History.		Penmanship.	Reading.	Chemistry.	Drawing.	Fortification.	Vocal Music.	Total.	Remarks.
												English.	Indian and Colonial.								
	Maximum -	—	110	80	80	80	80	430	110	100	110	130	60	75	100	150	80	75	80	1500	
	Minimum -	—																		·750	
1	Jerram, Henry	11	93	72	59	29	72	335	97	87	110	111	55	65	65	80	75	62	80	1222	Pupil Teacher, Royal Military Asylum.
2	Lindsay, Edwd.	13	90	73	56	80	57	356	78	70	61	117	34	35	60	95	30	70	65	1071	Private, 9th Lancers.
3	Holmes, Wm. -	12	107	56	52	47	65	327	93	95	95	71	48	30	45	80	48	72	55	1059	Civilian.
4	Leckey, John -	16	103	55	57	34	61	310	66	80	69	65	35	48	40	90	60	59	55	977	Lance Corporal, 102nd Foot.
5	James, Josiah -	14	98	55	65	29	37	284	94	56	50	32	19	48	60	60	58	51	65	877	Private, 1st Battalion, 8th Foot.
6	Yelf, Edward -	15	86	43	37	34	52	252	83	42	69	44	26	48	65	55	70	40	80	874	Private, 2nd Dragoon Guards.
7	Shields, William	19	81	43	48	31	32	235	72	69	85	72	42	50	63	50	40	34	60	872	Civilian.
8	Bradbury, Fred.	18	91	43	44	31	47	256	46	50	69	65	25	43	35	85	35	57	75	841	Lance Corporal, 30th Foot.
9	Treacy, Michael	17	97	52	41	33	39	262	54	47	75	39	19	53	30	50	45	39	75	788	Civilian.

App. VI.
No. 2.

Appendix V.—No. 2.

Report on the Half-yearly Examinations of the Royal Military Asylum Schools in the Years 1866–1867.

To Major-General Napier, Vice President of the Council of Military Education.

Sir,

The following were the numbers of boys present at the half-yearly examinations of the Royal Military Asylum Schools in the years 1866 and 1867.

The number of boys.

Midsummer 1866	487
Christmas 1866	485
Midsummer 1867	493
Christmas 1867	458

The complement is 500. The actual number resident in the asylum is generally a few less than the complement. The number present at each examination is short of the number resident by the number of boys in the hospital. At Christmas 1867 there were 40 in the hospital.

The ages of the boys.

The ages of the boys vary from 5 to 15. There are only 13 retained to 15 years of age, these are the band boys, all the rest leave at 14.

The following Table shows for each examination the number of boys of each age present.

Time of Examination.	Ages.										Total.
	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to 12.	12 to 13.	13 to 14.	14 to 15.	
Midsummer 1866	2	14	26	32	43	80	75	101	101	13	487
Christmas 1866	3	16	28	37	55	66	74	96	96	13	485
Midsummer 1867	2	11	29	37	58	79	77	84	103	13	493
Christmas 1867	—	8	16	53	50	76	86	70	86	13	458

Conditions of admission to the school.

To be admitted the boys must have lost one or both of their parents, (or if both of their parents be living their father must be on foreign service) and they must be free from mental or bodily defect or infirmity. They must be the children of men actually serving in the regular army, or have been born before their fathers ceased to serve therein, and the fathers, if living at the time of application, must either be still in the regular service or out-pensioners. The boys, on their admission, must not be under five years of age or above twelve years.

They are admitted by the Commissioners of the Royal Military Asylum on the recommendation of the commanding officers of the regiments in which their fathers have served.

The parent or other person who has charge of each boy signs on his admission an agreement to the effect that, when of proper age, he shall be placed with his own free consent in the regular army.

Of 95 boys who left in the year 1867 the number who entered the army was 59. There were 15 who were reported fit for the army but were withdrawn by their friends, and 21 were reported unfit for the army for medical reasons.

Disposal of the boys on leaving the asylum.

The boys are taught in five principal divisions or schools.

The five schools.

In the morning the boys of the first and third schools attend from $9\frac{1}{4}$ to $11\frac{1}{2}$; those of the second school from $9\frac{3}{4}$ to 12, and those of the fourth and fifth schools from 9 to $11\frac{1}{2}$.

School hours.

In the afternoon they all attend school from 2 to $3\frac{1}{2}$.

The elder boys have thus $3\frac{3}{4}$ hours schooling a day, and the younger 4 hours. Saturday afternoon is a holiday.

Subjects of instruction.

The subjects taught are religious knowledge, reading, writing, arithmetic, English grammar, geography, English history, vocal music, and drawing from models.

Masters.

The head master is Mr. McLeod, he is also master of the first school and normal master in the training school for regimental schoolmasters. He is an experienced and eminent teacher. Mr. Lamb is master of the second school, Mr. Lee of the third, Mr. Naylor of the fourth, and Mr. Dexter of the fifth or infant school. Mr. Dexter ranks next to the head master.

Student teachers.

The masters are assisted by those students of the training school who are in the last year of their residence.

There were 15 students so employed at Christmas last distributed as follows:

In School	I.	5 students.
„	II.	2 „
„	III.	3 „
„	IV.	2 „
„	V.	3 „

Ten of these students were about to complete their course of training at Christmas.

Trial lessons of the student teachers.

To judge of their fitness to be appointed to army schools Colonel Pocklington and I were both present at two lessons delivered to the boys of the first school by each such student teacher. One on a scriptural subject and the other on some branch of physical science, of a kind adapted to regimental lectures, the preparation and delivery of such lectures being a special branch of the instruction of the normal school. We took notes of their lessons with reference not only to their knowledge of the subject matter, but to the skill of the students in teaching the correctness of their enunciation and utterance and their power to command a class.

On some previous occasions we have thought it necessary by reason of defectiveness in some of these particulars to send students back to perfect themselves as teachers by another half-year's training, and in one or two instances we have reported them altogether unfit for the office of the teacher. At Christmas last we were able to pass them all, and they have all since been appointed to army schools.

The lessons in physical science.

It is the duty of Mr. Reynolds, the Principal of the training school, to teach them to make the experiments by which they are to illustrate the lectures in physical science, and it is impossible to speak in terms of too high commendation of the experiments he has taught them to make. Many of these he has himself devised with a special reference to the use of simple and economical apparatus and the experiments being seen by a large audience.

To deliver with success popular lectures in experimental science is a very difficult art. The students of the army training school have singular advantages for attaining it under the guidance and direction of Mr. Reynolds.

App. VI. No. 2.

Examination of the boys.

On the completion of the course of students' lessons I proceeded with Colonel Pocklington to examine the boys of the asylum in the various subjects in which they had been instructed, with the exception of religious knowledge, in which, finding that the Chaplain General was accustomed periodically to examine them, we did not think it necessary to repeat his examination.

Reading. Repetition of Poetry.

The boys of the first school read the first book of Milton's Paradise Lost and Goldsmith's Deserted Village intelligently and well. They, moreover, have learned by heart large portions of these two poems and repeat them accurately. At my examination at Christmas 1866 I found that the boys of the first class could repeat from 50 to 500 lines of Milton, and that one boy had committed to memory the whole of the first book. The first school was spoken of as well versed in the first book of Milton.

Mr. M'Leod's annotated edition of the first book of Milton.

The boys are taught the collateral knowledge necessary to understanding it by means of an annotated edition published for that purpose by Mr. McLeod, and they learn the construction of the sentences by the logical method called "analysis." As used in this school this method is a valuable expedient in elementary education.

The analysis of sentences.

The difficulty of rightly understanding compound sentences such as are to be found in our higher literature are almost insuperable to a mind not educated classically without some such elementary culture as this.

Writing from dictation.

I have before me specimens of the writing on paper of all the boys of the four first schools at each examination.

The following was the sentence dictated to the boys of the first class of the first school at Christmas 1866.

"When very near the islet, however, Rolf became more active, and "his skiff disappeared behind its southern point while the enemy's boat "was still two furlongs off. The steersman looked for the reappearance "of the canoe beyond the islet, but he looked in vain. He thought, "and his companions agreed," (50 words.)

Per cent. number of mistakes in spelling.

In writing this sentence 55 per cent. made no mistake in spelling, 19 per cent. made one mistake, $22\frac{1}{2}$ per cent. made two mistakes, and 3 per cent. more than two. Sentences were dictated to the boys of the other schools of less difficulty as the school was lower. The whole of the results are stated in the following Table.

They are not to be accepted as a means of comparing the merits of the teaching of spelling in one school with that in another, because it is impossible to graduate the sentences in difficulty according to the standards of proficiency to be expected in the different schools.

School.	Per-centage of Mistakes.			
	0.	1.	2.	Over 2.
I.	55	19	$22\frac{1}{2}$	3
II.	$7\frac{1}{2}$	78	15	0
III.	48	12	20	20
IV.	15	18	11	57

Penmanship.

The writing of the dictation exercises of the first class is in a bold clear school-boy hand, I cannot, however, speak of it as good penman-

ship. In the copybooks it is of course better. On the whole I think there is room for improvement in the penmanship of the school.

The sums set in the different schools are given in the following Table with the numbers per cent. of the boys in each of the three classes of each school who worked them correctly. These sums were worked hastily in the hurry of the examination. It would be unfair to give them as examples of the kind of sums they are capable of working. The boys of the first school have a thorough intelligence of all the rules of arithmetic and can solve arithmetical questions of great difficulty.

School.	Class.	Sum.	Number per Cent who did it right.
I.	1.	At what rate will the interest on 102*l.* 10*s.* amount to 12*l.* 13*s.* 8¼*d.* in 2½ years?	94
	2.	Find the value of 3 cwts. 2 qrs. 27 lbs. 15 ozs. 12 drs. at 7*l.* per cwt.	42
	3.	If 3 persons are boarded 4 weeks for 7*l.* how long should 14 persons be boarded for 112*l.*?	67
II.	1.	If 1,100 men make 10 miles of railroad in 3 months how long will it take 2,750 men to make 75 miles?	90
	2.	Find the greatest common measure of 900 and 3,474.	78
	3.	Bring to a single fraction $5\frac{3}{4} + \frac{3}{5}$ of $7\frac{1}{2} + 8\frac{3}{10}$.	73
III.	1.	If a day be divided into 16 equal parts how many hours and minutes are there in each part?	60
	2.	In 13 square yards how many square inches?	85
	3.	How many lbs. of tea at 5*s.* 3*d.* per lb. will twice 2*l.* 7*s.* 3*d.* buy?	56
IV.	1.	Multiply 8009 by 809.	46
	2.	Multiply 444*l.* 4*s.* 4*d.* by 101.	80
	3.	What must be paid for 67 cwt. of sugar at 3*l.* 5*s.* 8*d.* per cwt.?	52

App. VI. No. 2.

School.	Class.	Sum.	Number per Cent. who did it right.
V.	1.	From 701*l.* 1*s.* 1*d.* take 111*l.* 11*s.* 11*d.*	93
	2.	Add 9*l.* 9*s.* 9*d.*, 3*l.* 3*s.* 3*d.*, 4*l.* 4*s.* 4*d.*, 5*l.* 5*s.* 5*d.*, 6*l.* 6*s.* 6*d.*, 7*l.* 7*s.* 7*d.*	93
	3.	From 708,090 take 99,891.	92
	4.	Add 103,405, 764,573, 127,205.	80
	5.	Add 304, 253, 322.	81

Geography. English history. English grammar.

Geography and English history are taught in the four first schools, and the boys of the first school have generally a good elementary knowledge of these subjects. Grammar is also taught but not with so much success.

Time table of the first class of the first school.

I append a copy of the time-table of the first class of the first school as a specimen of the division of studies.

Model drawing.

The model drawing of the boys is highly commended by the Rev. Mr. Kingsley, the Council's examiner in drawing. Indeed he has been so much pleased with some of the drawings of the boys that he has himself generally given prizes to them. Mr. Kenworthy is the master of model drawing. Vocal music is taught by Mr. Martin and by the students of the normal school. The singing of some of the classes is excellent. All the boys learn music and some of them are proficients in instrumental music, of which the goodness of the asylum band affords the best evidence.

The number of boys who leave the asylum every year is on the average 96. Of these—

43, being 45 per cent., are (when they leave) in the 1st school.
33 „ 34 „ „ „ 2nd „
16 „ 15½ „ „ „ 3rd „
5 „ 5 „ „ „ 4th „

It may therefore be taken as a summary of the results obtained, that one half the boys when they leave have reached a standard of attainment equal to that of the most advanced boys in a middle class school of the best kind, being a larger proportion probably than are accustomed to leave such schools with that degree of attainment. Of the rest who leave, one third have reached about the standard of the most advanced boys in a national school. The remaining sixth are of the class of dull or incorrigibly indolent boys, on whom a great deal of labour has to be expended with a very inadequate result.

I have, &c.
Henry Moseley.

Model Schools.—Royal Military Asylum.

TIME TABLE.

1st Class.—1st School.

Morning.

Time.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
$9\frac{1}{4}$ to $9\frac{3}{4}$	Bible Lesson or Book VI.	Bible Lesson or Writing.	Bible Lesson or Multiplication Tables.	Bible Lesson or St. Paul's Travels.	Bible Lesson or English History.	Bible Lesson.
$9\frac{3}{4}$ to $10\frac{1}{4}$	Composition.	Grammar.	Gen. Geography.	Composition or Etymology.	Composition.	Nat. Philosophy or Book VI.
$10\frac{1}{4}$ to $10\frac{3}{4}$	Ment. Arithmetic.	Euclid.	Grammar.	British Empire.	Grammar.	Arithmetic. ($\frac{3}{4}$ hour.)
$10\frac{3}{4}$ to $11\frac{1}{2}$	Read and learn Poetry.	Arithmetic.	Arithmetic.	Dictation.	Arithmetic.	Recreation.

Afternoon.

2 to $2\frac{1}{2}$	Arithmetic. ($\frac{3}{4}$ hour.)	English History.	Music.	Arithmetic. ($\frac{3}{4}$ hour.)	Drawing.	Recreation.
$2\frac{1}{2}$ to 3		Writing.	Ditto.		Ditto.	Ditto.
3 to $3\frac{1}{2}$	Gen. Geography. ($\frac{3}{4}$ hour.)	Book VI.	Recreation.	Euclid. ($\frac{3}{4}$ hour.)	Recreation.	Ditto.

App. VI.
No. 3.

Appendix VI.—No. 3.

Royal Hibernian Military School.—Report of Examiners for Crimean Banquet Fund Prizes, December 1866.

Office of National Education, Dublin,
7th December 1867.

Sir,

We have the honour to enclose the tabulated summary of the answering of the senior division of boys in the Royal Hibernian Military School examined by us on the 3d, 4th, and 5th instant, for the Crimean Banquet Fund Prizes.

Having had the pleasure of discharging a similar duty last year, we are in a position to speak with confidence not only of the proficiency of the pupils generally, but also of the progress made within the year by such of them as were examined by us on each occasion; and we feel much gratification in being able to assure you that, in both respects, the results of our examination have been eminently satisfactory.

A considerable portion of the examination was carried on, as usual, by means of written exercises, which were executed with a degree of accuracy and neatness scarcely to be expected from so young a class of pupils.

The excellence of the reading and penmanship, and the expertness which the pupils displayed in solving arithmetical exercises, both written and *vivâ voce*, merit our highest commendation.

We have no difficulty in recording our opinion that the state of instruction in the classes we examined continues of a high order; and is such as to reflect great credit upon the skill and assiduity of Mr. Gibbons the head master.

We desire again this year to bring under your notice the orderly demeanour and propriety of conduct exhibited by the pupils while under examination.

We have, &c.

(Signed) M. FitzGerald.
William R. Molloy.

Lieut.-Colonel Wynyard, Commandant,
Royal Hibernian Military School.

Appendix VII.—No. 1.

App. VII. No. 1.

LECTURES.

Memorandum by Mr. McLeod.

Lectures.

The returns from the several stations show that 2,153 lectures were delivered to the troops in the winter of 1866–67, and 1,921 lectures in 1867–68. Fewer lectures appear to have been given during the season of 1867–68 than during 1866–67, but there are several stations at home and abroad from which no returns have as yet been received for the season 1867–68. When the returns are fully made up it is believed that there will not be any actual decrease in 1867–68, when compared with 1866–67.

Of the lectures for 1866–67, 71 were given by officers, 82 by chaplains and others, and 1,460 by army schoolmasters, and of the 1,901 lectures for 1867–68 the numbers given by officers, chaplains, and army schoolmasters were respectively 78, 74, and 1,127.

In addition to the experimenal and illustrated lectures, 2,932 in number, there were given 520 readings and concerts in 1866–67, and 622 in 1867–68. These entertainments were for the most part also given or conducted by army schoolmasters. In the appendix will be found programmes of the pieces read and the songs sung at some of the stations.* In the following list the letters R and C placed after the names of the stations denote respectively readings and concerts.

	1866–67.		1867–68.	
Aberdeen	R.	C.	R.	C.
Aden	R.	—	—	—
Aldershott	R.	C.	R.	C.
Athlone	—	C.	—	—
Ballincollig	R.	C.	—	—
Barbadoes	R.	C.	R.	—
Belfast	—	—	R.	—
Buttevant	—	—	R.	—
Brantford	R.	—	—	—
Channel Islands	—	—	R.	—
Chatham	—	—	—	C.
Chester	—	—	R.	C.
Colchester	R.	C.	R.	C.
Cork	R.	—	—	—
Curragh Camp	—	—	R.	C.
Devonport	R.	C.	—	—
Dover	—	—	R.	—
Dublin	R.	C.	—	—
Edinburgh	R.	C.	—	—
Enniskillen	—	—	R.	C.
Fredericton	R.	—	R.	—
Gibraltar	R.	C.	R.	C.
Kilkenny	—	—	R.	—
Kingston, Ontario	R.	—	R.	—
King William's Town	R.	—	—	—
Limerick	R.	C.	R.	C.
London, Ontario	—	—	R.	C.
Maidstone	R.	—	—	—

* These have been omitted.

App. VII.
No. 1.

	1866–67.		1867–68.	
Malta	—	C.	R.	C.
Manchester	R.	C.	R.	C.
Mauritius	—	C.	—	—
Meerut	—	—	R.	—
Montreal	R.	—	R.	C.
Newcastle, Jamaica	R.	C.	—	—
Ottawa	R.	—	R.	C.
Parkhurst	R.	—	R.	—
Piers Hill	—	C.	—	—
Portsmouth	R.	—	R.	C.
Preston	—	—	—	C.
Quebec	R.	C.	R.	C.
Regent's Park	—	C.	—	—
R. V. Hospital	R.	C.	—	C.
Sealkote	R.	C.	—	—
Secunderabad	—	—	R.	—
Shoeburyness	—	—	R.	C.
Shorncliffe	R.	—	—	—
St. John, N.B.	R.	—	R.	—
Sydney	—	C.	—	—
Toronto	—	—	R.	—
Walmer	R.	—	R.	—
Warley	R.	—	R.	—
Wellington Barracks	—	C.	—	—
Winchester	—	—	—	C.
Windsor	R.	—	R.	C.
Woolwich	R.	—	R.	C.
York	—	—	R.	—

On comparing the report for 1865–66 with the present one it will be seen that there is a large increase in the number of readings and concerts during the years 1866–67 and 1867–68. It may now be confidently stated that these entertainments are essential parts of that system which provides for the instruction and the amusement of the troops both at home and abroad.

In addition to the works mentioned in the last report, Moxon's Penny Readings and Cassell's Illustrated Penny Readings can be recommended both for their cheapness and their intrinsic merits.

At nearly all the stations songs, glees, or instrumental music formed an integral part of the lecture or reading. The following extracts show the importance attached by commanding officers to the readings and the vocal and instrumental accompaniments, whilst the character of the entertainments may be gathered from the series of programmes in the appendix.

"The readings were much enjoyed by the men, and were attended by "the officers in great numbers and by the leading people of Quebec."

"The readings were a series of 'Penny Readings,' given by the "officers, non-commissioned officers, and men of the garrison, under the "superintendence of the chaplain, the Rev. E. L. Walsh, B.A. They "were of a mixed character, comprising readings from various authors, "recitations, singing, and musical entertainments, and were highly "successful."

"Selections of music by the band of the 16th regiment, and songs "by teachers and soldiers were given at each entertainment. The "readings were selected from the works of the most popular authors.

" The lectures and readings were often attended by the officers of the " garrison and their families."

" I consider that the greatest credit is due to Schoolmaster Foster for " the trouble he has taken to render the readings attractive to the men. " They have been always well attended, and were a great source of " amusement during the winter months. I have attended several, and " consider that his selections have been judicious and his readings " extremely good."

" All the lectures and entertainments were exceedingly well attended " by officees and their families, non-commissioned officers, soldiers, and " their families. The greatest attendance was 840, the smallest atten- " dance 500 persons. Singing and music at all the entertainments, " the singing including glees, songs, &c., the music selections by band, " piano, and violin. The order and attention at all times excellent. " All the entertainments, with the exception of one, were given by " Schoolmaster Porter."

The number of experimental lectures given in 1866-67 amounted to 136, and in 1867-68 to 133. Lectures of this description must be limited in number, because apparatus is only supplied to stations where there is a permanent school, and where the schoolmaster is fully qualified to give lectures on experimental science. There is, however, a yearly increase in the number of such stations. In 1863-64 there were 12, in 1867-68 there were 25 stations at which lectures were delivered on scientific subjects.

Scientific lectures were given at the following stations during the last two years :

1. Aberdeen.
2. Aldershott.
3. Athlone.
4. Bangolore.
5. Brighton.
6. Canterbury.
7. Chatham.
8. Colchester.
9. Cork.
10. Curragh.
11. Devonport.
12. Dover.
13. Gibraltar.
14. Hounslow.
15. Kingston, Ontario.
16. Manchester.
17. Parkhurst.
18. Piers Hill.
19. Portsmouth.
20. Sheerness.
21. Sheffield.
22. Shoeburyness.
23. The Tower.
24. Winchester.
25. Woolwich.

It has been considered advisable to give the *titles* of some of the lectures delivered without the aid of the magic lantern, because it is not only instructive to peruse the titles employed but the reader can also form an idea of the *nature* of the lecture, and of its fitness for those for whose benefit these aids to improvement were designed. The titles are arranged under the heads of A., B., and C. Those under A. were experimental lectures, those under B. were illustrated by means of diagrams, coloured prints, sketches on the black board, &c., and those under C. were for the most part not illustrated. The list could have been easily extended, but a sufficient number has been given to enable the reader to form an estimate of their character and suitableness.

A. Electrical Toys.
Light and the Eye.
Electro-magnetism.
Curiosities of Chemistry.
Explosive Compounds.
Table rapping.

App. VII.
No. 1.

Magic and Mystery.
Noxious Gases.
Gunpowder and its proposed substitutes.
Our Earth.
Properties of Air.

B. Playing at Soldiers.
Uniforms of all ages.
The British Soldier in India.
Arms, equipment, and uniform of the British army.
General Neill's military career, with anecdotes of the British soldier in olden and modern times.
Marlborough's victories.
The records of our regiment.
Sir Henry Havelock.
Campaigning experience.
Projectiles used in war.

C. How to take care of No. 1.
A 1 at Lloyd's.
Busybodyism.
Giants and giant killers.
Man—the food he eats.
The struggle of man with nature.
Food and drink in relation to health.
Strong drink in its relation to crime.

Since the issue of the last report additional sets of slides for magic lantern lectures have been supplied to Aldershott, Gibraltar, Mauritius, Malta, Barbadoes, Canada, Halifax, and Sydney; apparatus for lectures on chemistry, electricity, &c. to Kingston, Manchester, Chatham, Devonport, Gosport, Canterbury, Sheerness, Colchester, Portsmouth, Woolwich, Royal Canadian Rifles, Aberdeen, Fort Brockhurst, and Plymouth; oil lanterns to Montreal (2), Cahir, and Newcastle-on-Tyne; and lanterns fitted with apparatus for the oxycalcium light to Sandhurst (2), Dover, Dublin (2), Walmer, Wellington Barracks (2), Brighton, Chester, and Portland. Lanterns for dissolving views were supplied to those stations against which the figure 2 is placed.

In addition to the slides in circulation extra boxes were forwarded on application to Chatham, York, Woolwich, Warley, the Royal Military College, Royal Victoria Hospital, Limerick, Aberdeen, Shoeburyness, Windsor, and Portsmouth. These additional sets were required chiefly for the amusement of the children attending the regimental schools on fête days and at Christmas time.

There are now 53 stations at home and 26 abroad, exclusive of those in India, where lectures are regularly delivered to the troops during six months of each year. To provide pictorial illustrations for the magic lantern lectures at these stations there are 6 sets of diagrams and 65 boxes of slides in circulation, and new sets of slides on history, geography, &c. are in preparation to meet the increasing demands.

Slides on the following subjects have been added during the last two seasons:—Australia and the Australians, the Victoria Cross Gallery, Medals of the British army, South America, the Discoveries of Grant, Speke, and Baker, Switzerland and the Swiss, Views in Ireland, Homes without Hands, Views in Scotland, the French Revolution, and also

slides to illustrate the stories of Hans in luck, the Sultan and the Monkey, the Waits of Bremen, Dame Perkins, John Gilpin, and Robinsoe Crusoe.

Lectures to the troops may now be considered as one of the established means for the mental and moral improvement of the soldier, and that these lectures are beneficial, that they induce the men to read and to inquire, that they tend to elevate their character, are facts that cannot be disputed.

The annexed extracts from the reports of lectures show that the men highly appreciate the means provided for their instruction and amusement.

" The lectures were very popular with the men."

" The lectures were very instructive and pleased the men very much."

" The lectures gave great satisfaction, and were duly appreciated by " the large numbers that attended."

" The lectures have been very popular and beneficial, combining " amusement for the non-commissioned officers and men in barracks " with much useful information."

" The non-commissioned officers and men of the H Battery, 9th " brigade, Royal Artillery, to mark their appreciation of the lectures " delivered to them presented a silver inkstand bearing a suitable in- " scription to Schoolmaster Runcieman."

It is gratifying to mark the success of the lectures, the readings, and the musical entertainments; and the tabulated results of the lectures and the favourable reports of commanding officers bear testimony to the zeal, the industry, and the ability of the army schoolmasters during the last two years.

PP. VII.
No. 2.

APPENDIX VII.—No. 2.

STATEMENT of LECTURES given to the TROOPS in the Winter of 1866–67.

Stations.	Lectures by Officers.	Lectures by Chaplains.	Lectures by School-masters.	Readings and Concerts.	Total No.	Estimated No. at each Lecture.
Aberdeen	—	4	8	4[1]	16	98 to 140
Aden	—	—	3	3	6	25 „ 80
Aldershott	4	—	209	71[2]	284	38 „2000
Athlone	—	—	14	9	23	20 „ 60
Ballincollig	—	4	9	—	13	80 „ 100
Bangalore	—	—	3	—	3	171 „ 230
Barbadoes	—	—	20	9	29	500 „ 840
Belfast	—	—	7	—	7	30 „ 60
Brantford, C.W.	—	—	9	6	15	184 „ 367
Buttevant	—	—	10	—	10	50 „ 230
Cahir	—	—	15	18[3]	33	60 „ 200
Canterbury	—	—	15	—	15	70 „ 250
Chatham:						
St. Mary's Barracks	—	—	10	—	10	45 „ 95
1st Depôt Battalion	—	—	54	—	54	33 „ 125
2nd Depôt Battalion	—	—	18	—	18	77 „ 197
Chelsea Barracks	—	—	—	31	31[4]	500
Colchester:						
King's Drag. Guards	—	—	2	—	2	23 „ 60
4th and 8th Dep. Batt.	2	4	25	3	34	100 „ 300
Cork	—	—	11	—	11	80 „ 300
Curragh Camp	2	—	64	—	66	84 „ 170
Devonport	4	6	59	12	81	40 „ 200
Dover	1	3	18	—	22	40 „ 220
Dover Castle	1	1	7	—	9	46 „ 220
Dublin	—	2	44	16	62	40 „ 350
Edinburgh Castle	—	—	24	15[5]	39	24 „ 90
Edinburgh, Leith Fort, and Piers Hill.	—	—	50	19[6]	69	30 „ 300
Fermoy	—	1	10	—	11	80 „ 200
Fredericton:						
22nd Regt., 1st Batt.	3	—	3	—	6	150 „ 200
15th Regt., 1st Batt.	—	—	5	2	7	30 „ 40
Gibraltar	—	—	70	12	82	30 „ 290
Glasgow	—	—	12	24[7]	36	30 „ 80

[1] Two lectures by Dr. Longman, one by Dr. Beveridge, and readings by Staff Sergeant M'Phee.

[2] Thirty-four concerts, four theatrical performances, and 33 readings.

[3] Eighteen theatrical performances.

[4] The 31 concerts by the non-commissioned officers and men of the battalion.

[5] One reading by Sergeant Major Allen, and 14 concerts by Rev. J. Millar. There were in addition 16 microscopical exhibitions.

[6] Concerts and readings by Rev. J. Millar, Sergeant-Major Allen, Bandmaster Devine, and Corporal Black; Serjeant Moran, Acting Schoolmaster, gave two lectures.

[7] Twenty-four theatrical performances.

Stations.	Lectures by Officers.	Lectures by Chaplains.	Lectures by School-masters.	Readings and Concerts.	Total No.	Estimated No. at each Lecture.
Halifax, N.S.	—	—	11	—	11	50 to 120
Hamilton, C.W.	—	—	13	14[1]	27	40 „ 400
Kingston, C.W.	3	—	22	—	25	50 „ 192
King William's Town, Cape:						
1st Batt. 10th Foot	—	—	8	8	16	55 „ 300
Cape Mounted Rifles	—	—	—	13	13	120
Limerick	—	24[2]	2	1	27	20 „ 350
London, St. George's Bks.	—	—	3	—	3	75 „ 80
London, C.W.	—	—	11	—	11	150 „ 200
Maidstone	—	—	13	—	13	20 „ 52
Malta	12	—	14	6	32	50 „ 400
Manchester:						
39th Regiment	—	—	3	—	3	250 „ 360
1st Dragoons	—	—	8	7	15	140 „ 250
54th Regiment	—	—	9	6	15	50 „ 300
Mauritius:						
2nd Batt. 22nd Regt.	—	1	10	1[3]	12	80 „ 380
32nd Light Infantry	—	—	9	—	9	70 „ 95
2nd Batt. 13th Lt. Inf.	—	—	18	—	18	45 „ 120
Montreal, C.E.:						
4th Batt. Rifle Brigade	—	—	9	—	9	45 „ 120
Royal Artillery	—	1	14	—	15	60 „ 130
1st Batt. 25th Regiment	—	—	7	16[4]	23	80 „ 160
Newcastle, Jamaica	—	—	2	—	2	300 „ 400
Ottawa	3	1	—	—	4[5]	12 „ 40
Parkhurst	—	—	9	—	9	58 „ 300
Pembroke Dock	—	—	15	—	15	50 „ 300
Piers Hill	—	—	18	3	21	60 „ 100
Portsmouth	—	3	70	24[6]	97	40 „ 319
Preston	—	—	9	12[7]	21	30 „ 150
Quebec:						
Citadel	1	—	18	43[8]	62	58 „ 240
30th Regiment	—	—	11	5	16	90 „ 180
Royal Artillery	25	—	3	—	28	100 „ 280
Regent's Park	—	1	3	2	6	79 „ 370
Royal Military College	1	1	5	—	7	40 „ 150
R. Victoria Hospital, Netley	4	—	8	11[9]	23	100 „ 350
Royal Hibernian Schools	—	—	4	—	4	200
Royal Military Asylum	—	—	20	—	20	200 „ 250
Sealkote	—	6	10	16	32	
Sheerness	—	—	16	6[10]	22	28 „ 230

[1] Fourteen theatrical performances.
[2] Concerts, readings, &c. by Rev. Mr. Wright and Rev. Dr. Wilson.
[3] Concert by officers and bandmaster.
[4] Four readings by Colour Sergeant Pilkington.
[5] Lectures by Dr. Van Courtlandt, Professor Webster, Captain Lee, and Rev. Mr. Johnson.
[6] Twelve of these were theatrical performances.
[7] Twelve theatrical performances.
[8] Forty-one readings and two concerts.
[9] Two readings by Sergeant-Major Rawlins, three by Sergeant Webb, and one theatrical performance by amateurs of the Army Hospital Corps.
[10] Theatrical performances by officers and men of the regiment and superintended by Schoolmaster Lowman.

APP. VII.
No. 2.

Stations.	Lectures by Officers.	Lectures by Chaplains.	Lectures by School-masters.	Readings and Concerts.	Total No.	Estimated No. at each Lecture.
Sheffield	1	—	14	—	15	75 to 210
St. John's, N.B.	—	—	—	5	5	180
Shorncliffe	—	—	52	18	70	40 „ 350
Sydney	—	16[1]	2	4	22	40 „ 180
Templemore	—	2[2]	6	—	8	20 „ 300
The Tower	—	—	6	—	6	80 „ 90
Toronto:						
Parliament Buildings	—	—	6	—	6	150 „ 300
4th Brigade, R.A.	—	—	3	—	3	30 „ 120
2nd Batt. 17th Regt.	—	—	13	—	13	50 „ 260
13th Hussars	—	—	—	12[3]	12	300
4th Brigade, R.A.	—	—	16	—	16	20 „ 290
Troop Ship, Clyde	4	—	11	—	15	120 „ 150
Walmer	—	—	23	1	24	25 „ 200
Warley	—	—	23	10	33	73 „ 240
Wellington Barracks	—	—	2	3[4]	5	200 „ 330
Winchester	—	—	10	10	20	50 „ 220
Windsor:						
R.H. Guards	—	—	8	—	8	57 „ 70
2nd Batt. S.F.G.	—	—	7	6[5]	13	25 „ 120
Woolwich	—	1	57	3	61	45 „ 300
York	—	—	8	—	8	40

[1] Fourteen lectures on total abstinence by gentlemen from Sydney.
[2] One lecture on temperance by Dr. Lees of Leeds.
[3] Twelve theatrical performances by non-commissioned officers and men.
[4] Three concerts by Battalion Glee Class.
[5] Six readings by Captain Gascoigne.

Appendix VII.—No. 3.

Names of Army Schoolmasters who have given Lectures during the Season of 1866-67.

Stations.	Lecturers.	No. of Lectures, &c.
Aberdeen	T. Anderson	8.
Aden	Burton	3 and 3 readings.
Aldershot	Short	14, 4 concerts, and 4 theatrical entertainments.
	McLean	32 and 2 concerts.
	Rogers	32, 3 concerts, and 5 readings.
	Hickling	36
	Bell	17 } These include 6 concerts and 22 readings.
	Polden	3
	Burns	16 } and 15 concerts and 2 readings.
	Armstrong	2
	Wells	15.
	Compton	6.
	Williams	24 } including 3 concerts.
	Kavanagh	5
	R. Belling	12.
	Davies	10.
	Fletcher	23, including 1 concert and 2 readings.
Athlone	J. Pither	23, including 2 concerts and 7 theatrical performances.
Ballincollig	Atkinson	9.
Bangalore	W. Robinson	3.
Barbadoes	J. Porter	28, including 4 readings and 5 musical entertainments.
	J. Davis	1.
Belfast	G. Venn	7.
Brantford, C.W.	Rix	9 and 6 readings.
Buttevant	F. Alderton	10.
Cahir	Eldridge	15 and 18 theatrical performances.
Canterbury	Bolus	10.
	Coo	5.
Chatham	W. Gell	8.
	J. Dorman	2.
	Runcieman	53.
	Small	1.
	D. McIllheron	13.
	C. Wilson	5.
Colchester	Capon	2.
	Carnegie	10 and 2 readings.
	Ruggles	4.
	Harris	6.
	White	2.
	Raymond	3.

APP. VII. No. 3.

Stations.	Lecturers.	No. of Lectures, &c.
Cork	R. Kenny	9 and 2 readings.
Curragh	Newsom	34.
	Moore	19.
	Stewart	3.
	Kenny	2.
	Polden	6.
Devonport	W. Savage	20.
	Colquhoun	13.
	McElwee	9.
	Fryer	12.
	Wells	5.
Dover	Stewart	9.
	Cochrane	12.
	Mahoney	2.
	Baskerville	2.
Dublin	J. Barnes	17.
	Allen	2 and 5 concerts.
	Holland	5 and 6 readings.
	Shipman	9 and 5 readings.
	Moore	1.
	J. Newsom	10.
Edinburgh, Leith Fort, and Piers Hill.	Robertson	42.
	Fowler	23.
	James	7.
	Sergeant Moran, Acting Schoolmaster.	2.
Fermoy	James McLean	10.
Fredericton	W. R. Hall	3.
	J. Williams	5 and 2 readings.
Gibraltar	W. H. Stubbs	15 and 1 reading.
	M. A. Black	12 and 2 readings.
	C. M. Fleming	14 and 1 reading.
	R. Pell	7 and 2 concerts.
	J. Boland	13 and 1 reading.
	Sch. Serjeant Vaughan	9 and 5 concerts.
Glasgow	W. Bryan	12.
Halifax, N.S.	Mallory	5.
	Green	5.
	Hazard	1.
Hamilton, C.W.	E. Bramhall	13.
Kingston, C.W.	McLean	12.
	Mallandain	10.
King William's Town, Cape.	J. G. Kidd	8 and 8 readings.
	Schoolm., Cape Mounted Rifles.	13 readings.
Limerick	Henderson	2 and assisted at 24 in addition given by the chaplain.
London, Saint George's Bks.	A. Thomson	3.

Stations.	Lecturers.	No. of Lectures, &c.
London, C.W.	Jones	8.
	Davison	3.
Maidstone	S. H. Goadby	13.
Malta	Scarlett	5
	Murray	4 and 6 concerts by Hebb, Wonnacott and O'Connor.
	Hebb	2
	Myles	3
Manchester	A. Parsons	3.
	J. Gilbert	8 and 13 concerts and readings.
	J. Bell	8
	Kirke	1.
Mauritius	Ship	10.
	Davies	9.
	J. Beresford	18.
Montreal, C.E.	J. Little	26.
	Major	3.
	Hamilton	1.
Newcastle, Jamaica.	R. C. Stapley	2 and 1 concert.
Parkhurst	T. Carson	5.
	W. Stevenson	3.
Pembroke Dock	Sheffield	8.
	McArdle	7.
Piers Hill	W. James	17.
Portsmouth	R. Kirk	12.
	Bass	12.
	Annett	7.
	Palmer	17 and took part in 6 readings and 2 theatrical performances.
	W. Brown	8 and took part in 8 theatrical performances.
	McMahon	8.
	Moran	6.
Preston	T. Earp	9.
Quebec	J. H. Foster	24, 40 readings, and 2 concerts.
	R. Waters	11, 4 readings, and 1 concert.
Regent's Park	J Pollard	3.
Royal Military College.	Keley	5.
Royal Victoria Hospital, Netley.	A. Cooper	8,
Sealkote	Hanley	10.
Sheerness	Lowman	16 and superintended 6 theatrical performances.
Sheffield	R. Bateman	11.
	J. A. Smears	3.

App. VII.
No. 3.

Stations.	Lecturers.	No. of Lectures, &c.
Shorncliffe -	E. Giles - - -	16 and 2 readings.
	W. McEwen - -	24 and 3 readings.
	J. Compton - -	6.
	A. Wilson - - -	4.
	W. Gooding - -	10 and 1 prologue.
Sydney - -	J. Gunn - - -	2.
Templemore and Malta.	Murray - - -	4.
	Sergeant Inst. Russell -	2.
The Tower -	W. H. Bird - -	6.
Toronto - - -	F. Ward - - -	6.
	Wicks - - -	3.
	Stockham - -	29.
Troop Ship Clyde	Pither - - -	11.
Walmer - -	D. McKay - -	16.
	D. Morrison - -	5 and 1 reading.
	C. Hicks - - -	3.
Warley - -	Ruffle - - -	16.
	Howard - -	7.
Wellington Bks.	W. Minnion - -	2.
Winchester -	G. Rice - - -	10.
Windsor - -	Loftus - - -	8.
	J. Chambers - -	7.
Woolwich -	J. Grant - - -	24.
	Thacker - -	13.
	Stanton - - -	16.
	Gooding - - -	4.
York - -	H. Hunt, Act. Schoolmaster	8.

Appendix VII.—No. 4.

Statement of Lectures given to the Troops in the Winter of 1867–68.

Stations.	Lectures by Officers.	Lectures by Chaplains.	Lectures by Schoolmasters.	Readings and Concerts.	Total Number.	Estimated Number at each Lecture.	
						Adults.	Children.
Aberdeen	—	6 [1]	9	16	31	84 to 165	15 to 26
Aldershot	26 [2]	14	115	63	218	20 „ 590	8 „ 104
Athlone	—	—	5	—	5	40 „ 220	50 „ 80
Barbadoes:—							
2nd Battalion, 16th Regt.	—	—	18	2	20	120 „ 720	20 „ 150
4th West India Regt., &c.	—	—	7	2	9	250 „ 300	30 „ 50
Belfast	—	1	2	6	9	20 „ 70	35 „ 70
Brantford, C.W.	1	—	8	—	9	20 „ 70	15 „ 30
Brighton	—	—	16 [3]	—	16	15 „ 92	6 „ 20
Buttevant	—	—	3	25 [4]	28	80 „ 140	50 „ 60
Canterbury	—	—	12	—	12	40 „ 139	12 „ 70
Channel Islands	—	—	6 [5]	4 [5]	10	21 „ 30	—
Chatham:—							
1st Depôt Battalion and Military Train.	—	—	54	4	58	36 „ 230	36 „ 80
St. Mary's Barracks	—	3	14	—	17	80 „ 200	—
2nd Depôt Battalion	—	—	27	—	27	60 „ 182	—
Chester	—	—	6	10	16	40 „ 200	20 „ 50
Colchester	—	4	29	26	59	85 „ 170	15 „ 30
Cork	—	—	9	—	9	50 „ 100	30 „ 100
Curragh Camp	—	—	45	10	55	30 „ 220	7 „ 40
Devonport	—	—	42	8	50	12 „ 130	12 „ 150
Dover:—							
2nd Batt., 5th Fusiliers	—	1	7	1	9	29 „ 100	25 „ 80
Various Brigades	—	3	18	1	22	20 „ 100	24 „ 100
27th and 49th Regiments	—	—	2	—	2	30 „ 100	10 „ 67
The Castle	—	1	6	—	7	20 „ 40	25 „ 100
Edinburgh Castle	—	—	7	—	7	40 „ 90	—
Enniskillen	—	—	—	9	9	—	—
Fermoy	—	—	6	—	6	5 „ 180	20 „ 25
Fredericton, N.B.	1	—	—	1	2	40	20

[1] Six lectures by Dr. Beveridge, Rev. Dr. Longmuir, Rev. W. Keay, A. Laing, Esq., and Messrs. Stewart and Clark; and fourteen readings by Staff-Sergeant McPhee, musketry instructors Lonsdale and Wishart.

[2] Lectures by Dr. Pope, M. Zamoiski, Professors Hamilton, Fredericks, St. George, and Sergeant Gairthwait; readings and concerts by officers' ladies, &c. of Royal Artillery, 68th Light Infantry, 98th Regiment, 54th Regiment, Royal Engineers, 43rd Regiment, 4th Dragoon Guards, 80th and 56th Regiments.

[3] Five lectures by Miss Robinson.

[4] Six readings by Colonel Ingall, C.B., and other officers, non-commissioned officers, and men; and 19 theatrical performances.

[5] Two lectures by Corporals Wilson and Marshall; and four readings by Lieut. Weymiss, R.A., Rev. Mr. Dobré, and Dr. Cummings, R.A.

App. VII.
No. 4.

Stations.	Lectures by Officers.	Lectures by Chaplains.	Lectures by Schoolmasters.	Readings and Concerts.	Total Number.	Estimated Number at each Lecture.	
						Adults.	Children.
Gibraltar	—	—	38	4	42	70 to 150	12 to 60
Glasgow	—	1	8	1	10	14 „ 50	11 „ 43
Halifax, N.S.	1	—	6	—	7	50 „ 112	12 „ 40
Hamilton, Canada	—	—	2	—	2	60	10
Hong Kong	—	—	6	—	6	60 to 170	—
Hounslow	—	—	7	—	7	36 „ 180	45 to 60
Kilkenny:—							
E Battery, 9th Brigade, R. Art., &c.	5	—	1	14 [1]	20	40 „ 200	5 „ 40
1st Battalion, 17th Foot	—	—	4	—	4	20 „ 140	50 „ 80
Kingston, Ontario	—	—	14	1	15	11 „ 101	10 „ 70
Limerick	—	14 [2]	3	4	21	40 „ 350	20 „ 30
London, Ontario	—	—	22	7	29	60 „ 120	40 „ 50
Maidstone	—	—	16	—	16	6 „ 50	11 „ 40
Malta:—							
1st Battalion, 8th Regt.	—	—	9	6 [3]	15	40 „ 300	—
R. Artillery and R. Engnrs.	4 [4]	—	1	—	5	100 „ 500	—
1st Batt., 14th Regiment	—	—	8	1	9	40 „ 130	—
87th Fusiliers	—	—	6	1	7	85 „ 290	—
Manchester	3	—	10	25 [5]	38	10 „ 300	30 to 90
Meerut	—	—	7	6	13	150 „ 250	—
Montreal:—							
78th Highlanders	—	—	13	—	13	30 „ 200	—
1st Battalion, 60th Rifles	—	—	10	4	14	50 „ 100	—
Royal Artillery	—	—	24	—	24	50 „ 120	—
1st Battalion, 16th Foot	—	—	11	8 [6]	19	30 „ 400	—
100th Regiment	—	—	11	2	13	50 „ 300	—
Newcastle-on-Tyne	—	—	7	—	7	5 „ 20	29 to 31
Ottawa, Ontario	—	—	31	134 [7]	165	23 „ 91	6 „ 20
Parkhurst	—	6 [8]	6	26 [9]	38	70 „ 900	20 „ 40
Pembroke Dock	—	—	15 [10]	—	15	60 „ 150	—
Pier's Hill	—	—	8	—	8	13 „ 100	—
Portland	—	—	8	—	8	12 „ 30	24 to 30
Portsmouth, Gosport, &c.	—	7	72	39 [11]	118	36 „ 295	4 „ 60
Preston	—	—	6	16	22 [12]	40 „ 120	10 „ 30

[1] Five readings and nine theatrical entertainments.
[2] Rev. Mr. Wright nine lectures, and five by Rev. Mr. Wright and schoolmaster R. Armstrong.
[3] Six musical entertainments and readings by Colonel McCrea, Capt. Lewis, and the men of the Regiment.
[4] Four readings by officers of Royal Artillery and Royal Engineers.
[5] Twenty readings, two concerts, and three theatrical entertainments.
[6] Eight theatrical entertainments by the theatrical company of the battalion under the management of the schoolmaster.
[7] Thirty-two readings by Rev. T. Phillips, and one by Capt. Huyshe.
[8] Six lectures by Messrs. Newman, Cooper, and Holme.
[9] Sixteen theatrical performances.
[10] One lecture by Mr. Kennedy, H.M.'s ship "Revenge."
[11] Seventeen theatrical performances.
[12] Eleven theatrical performances.

Stations.	Lectures by Officers.	Lectures by Chaplains.	Lectures by Schoolmasters.	Readings and Concerts.	Total Number.	Estimated Number at each Lecture.	
						Adults.	Children.
Quebec :—							
30th Regiment	4	—	12 [1]	3	19	40 to 225	3 to 72
3rd Brigade, R.A.	8	—	—	4 [2]	12	50 „ 90	—
Royal Military College	—	—	1	3	4	30	20
Royal Victoria Hospital	7	—	6	5	18	40 to 230	12 to 70
Royal Military Asylum	—	—	20	—	20	—	200 „ 250
Secunderabad	6	—	—	—	6	120 to 250	—
Sheerness	—	—	18	16 [3]	34	12 „ 220	25 to 111
Sheffield	—	—	10 [4]	—	10	95 „ 240	—
Shoeburyness	11 [5]	3	4	10	28	80 „ 1500	—
Shorncliffe :—							
10th D. B. and G. Staff	—	—	14	10	24	110 „ 280	25 to 65
7th Dragoon Guards	—	—	3	—	3	150 „ 200	40 „ 60
12th Depôt Battalion	—	—	9	—	9	90 „ 400	30 „ 150
St. John, N.B.	—	—	—	2	2	180	—
St. John's, Newfoundland	—	—	3	—	3	27 to 68	14 to 66
Sydney, N.S.W.	—	7	4	—	11 [6]	70 „ 140	10 „ 26
Toronto, Ontario :—							
Head Quarters, and Detachments of 2nd and 17th Regiments.	—	—	17	1 [7]	18	80 „ 263	40 „ 157
4th Brigade, R.A.	—	—	23	—	23	54 „ 348	48 „ 132
H.M.'s Gun Boat "Heron."	—	—	6	—	6	46	—
13th Hussars	—	—	17	9	26	20 to 250	10 to 30
Walmer	—	—	10	1	11	83 „ 300	—
Warley	—	—	20	12	32	75 „ 240	—
Wellington Barracks, London	—	—	12	—	12	80 „ 130	—
Wellington, New Zealand	1	—	14	—	15	35 „ 85	—
Winchester	—	—	10	12 [8]	22	60 „ 115	25 to 40
Windsor	—	—	7	12	19	97 „ 500	18 „ 78
Woolwich	—	3	32	29 [9]	64	20 „ 760	10 „ 110
York	—	—	12	6	18	12 „ 70	40 „ 50

[1] One lecture by Lance-Corporal J. Webb.
[2] Readings by Sergeant-Major Stanton and the officers of the Royal Artillery; and eight lectures by Sergeant-Major Stanton, R.A.
[3] Sixteen theatrical performances.
[4] One lecture by Mr. Harbourne.
[5] Lectures by Colonel Eardley Wilmot, officers, &c. There were also six lectures on metals and six on gunpowder by Messrs. Spiller and Brown of the Royal Arsenal, Woolwich.
[6] There were, in addition, thirty-one lectures, &c. on temperance by Captain Doran and gentlemen from Sydney.
[7] One reading by Lance-Corporal Cashin.
[8] Eleven theatrical performances.
[9] Fourteen concerts and nine theatrical performances.

App. VII.
No. 5.

Appendix VII.—No. 5.

Names of Army Schoolmasters who have given Lectures during the Season of 1867–8.

Stations.	Lecturers.	No. of Lectures, &c.
Aberdeen	T. Anderson	9.
Aldershott	Fowler	31 and 2 readings.
	Hickling	12 and took part in 14 readings.
	Lacey	10 and 2 readings.
	McLean	11 and 1 reading.
	McElwee	9.
	Moran	8 and took part in 5 readings.
	Hayes	7 and took part in 5 readings.
	Belling	5.
	Carson	5.
	Capon	4.
	White	3.
	Stewart	2.
	Howard	1 exhibition of comic slides.
	McMahon	4.
Athlone	R. Taylor	5.
Barbados	John Porter	18 and 2 readings.
	James Davies	7 and 2 readings.
Belfast	W. Gell	1.
	G. Venn	1.
Brantford, C.W.	A. McMahon	8.
Brighton	E. Rogers	4.
	T. E. Spiller	7.
Buttevant	F. Alderton	3.
Canterbury	Bolus	6.
	Spiller	4.
	French	2.
Channel Islands	C. Fletcher	4.
Chatham	A. Runcieman	54 and took part in 4 concerts.
	Bacon	4.
	A. Parsons	12.
	Kenny	2.
	D. McIlherron	20.
	Halfpenny	7.
Chester	J. B. Compton	1.
	Halfpenny	5.
Colchester	Carnegie	12 and 9 readings.
	Bell	8 and 8 readings.
	Marshall	5 and 8 readings.
	McCormick	4.

Stations.	Lecturers.	No. of Lectures, &c.
Cork	J. Burns	7.
	J. Wells	2.
Curragh Camp	G. Robertson	38.
	E. Shipman	2 and 2 concerts.
	W. Gell	1.
	W. Woodward	1 and 2 concerts.
	C. Coo	3.
	Weller	1 reading.
Devonport	Savage	21.
	Fryer	11.
	Winter	8.
	Astbury	2.
Dover	J. W. Stewart	6.
	J. A. Smears	11.
	Cochrane	12.
	Matthews	4.
Edinburgh Castle	R. C. Stapley	7.
Enniskillen	Geo. Holland	4 concerts and 1 reading.
Fermoy	Gooding	1.
	Polden	4.
	Mackinder	1.
Fredericton, N.B.	W. R. Hall	1 reading.
Gibraltar	E. K. Macartney	8.
	W. Stubbs	7 and 1 reading.
	M. A. Black	2.
	W. M. Arthur	9 and 3 concerts.
	J. Boland	4.
	J. W. Gillmore	2.
	Bell	4.
	McCormick	2.
Glasgow	G. B. Hamilton	6.
	Sch. Asst. Eskrigge	1.
Halifax, N. S.	Green	4.
	Hazard	2.
Hamilton, Canada	P. H. Clarke	1.
	Act. Sch. T. Downey	1.
Hong Kong	G. Green	6.
Hounslow	G. Annett	7.
Kilkenny	White	1.
	Colquhoun	4.
Kingston, Ontario	McLean	6.
	Mallandain	8 and 1 reading.
Limerick	R. Armstrong	3, 2 concerts, 2 readings, and took part in 5 lectures.
London, Ontario	Jones	12 and took part in 5 readings.
	Davison	10.
Maidstone	S. H. Goadby	12 and 4 exhibitions of dissolving views.

App. VII. No. 5.

Stations.	Lecturers.	No. of Lectures, &c.
Manchester	Bass	1.
	Belling	2.
	Brown	4.
	Scholvien	3.
Meerut	Attwell	7 and 6 readings.
Malta	Wonnacott	8.
	Murray	4.
	Wheeler	2.
	Scarlett	3.
	Moore	1 and 1 reading.
	Boland	6 and 1 reading; given to the regiment at Gibraltar.
Montreal	Little	44.
	Fleming	7.
	Hebb	4 and 4 concerts.
	Myles	4.
	Bramhall	5.
	Hopkins	5 and 1 reading.
Newcastle-on-Tyne.	Ship	7.
Ottawa, Ontario	J. H. Foster	31 and 99 readings.
Parkhurst	McLean	6.
Pembroke Dock	Th. Sheffield	14.
Piers Hill	F. Lowry	8.
Portland	Berresford	8.
Portsmouth, Gosport, &c.	R. Kirk	10.
	Brown	8.
	Palmer	20.
	Walker	7.
	Thane	3.
	Carthew	6.
	Bacon	4.
	Hobbs	8.
	Burgham	6.
Preston	Earp	6.
Quebec	R. Waters	11.
Royal Military College.	Keley	1.
Royal Victoria Hospital, Netley.	A. Cooper	6.
Sheerness	Lowman	15.
	Astbury	3.
Sheffield	Bateman	9
Shoeburyness	T. W. Smith	2.
	Actg. School-master Serg. Abbott.	2.

Stations.	Lecturers.	No. of Lectures, &c.
Shorncliffe -	McKay - - -	4.
	McEwen - -	5.
	Langford - - -	2.
	Kearns - - -	2.
	Wroughton - - -	3.
	Burgham - - -	9.
St. John, N. B. -	W. Levitson - -	2 readings.
St. John's, Newfoundland.	C. Hicks - -	3.
Sydney, N.S.W.	J. R. Gunn - - -	4.
Toronto, Ontario	S. Stockham - - -	63.
	Flood - - -	1.
Walmer - -	McKay - - -	1.
	Giles - - -	4.
	Rix - - -	5 and 1 reading.
Warley - -	C. Stanton - - -	4.
	T. Ruffle - - -	6.
	S. Howard - - -	6.
	A. Douthett - -	4.
Wellington Barracks, London.	Bird - - -	12.
Wellington -	Shannon - - -	14.
Winchester -	G. Rice - - -	8.
	W. Myatt - -	2.
Windsor - -	W. Richardson - -	7 and 1 reading.
Woolwich -	J. Grant - - -	13.
	W. Thacker - -	8.
	E. H. Rogers - - -	6.
	C. Stanton - -	3.
	E. Bacon - - -	2.
York - -	W. Stevenson - -	12.

Note.—A return of lectures was received from St. Helena too late for insertion in the Fourth Report of the Council. This return shows that five lectures illustrated by the lantern had been given during 1865-66 by Sergeant Edwards of the 1st Battalion, 10th Regiment. In like manner eight lectures and one reading had been given during the same season to the Ordnance Corps at King William Town, Cape of Good Hope, by Schoolmaster Kidd; while at the same place eleven lectures by Schoolmaster Northway and one by Lt. Poole, R.A., had been delivered to the men of the Cape Mounted Rifles.

App. VIII.
No. 1.

Appendix VIII.—No. 1.

LIST OF ARMY LIBRARIES, 1867-8.

Garrison Libraries.

Station.	No. of Companies.	No. of Volumes in the Library 31st March 1868.	No. of Volumes circulating during the Year 1867-8.	Contributions from Recreation Room Funds. £	s.	d.
Aberdeen	6	1,108	4,206	16	9	8
Adelaide	3	498	1,037	3	2	9
Alderney	3	495	2,006	5	5	9
Aldershot	101	8,613	26,990	104	11	3
Ashton	5	277	132	2	5	0
Athlone	11	1,691	5,437	17	17	6
Ayr	2	320	2,809	7	18	9
Bahamas	—	126	—		—	
Ballincollig	3	649	2,633	4	10	0
Barbadoes	14	2,505	2,023	22	5	6
Bathurst	2	501	100	8	2	0
Belfast	6	1,290	2,947	10	3	6
Bermuda	13	2,064	4,323	19	17	6
Birmingham	2	537	723	6	6	3
Birr	2	1,510	2,566	3	10	0
Brighton	4	398	1,450	7	19	8
Burnley	2	541	211	8	10	1
Bury	4	298	514	2	18	4
Buttevant	6	1,384	2,647	14	7	6
Cahir	3	510	1,398	12	3	0
Canterbury	12	2,521	2,728	31	8	0
Cape Coast Castle	4	411	343	13	3	0
Cape Town	14	1,667	800	23	18	6
Ceylon	20	4,005	7,330	35	12	6
Chatham	42	6,075	30,220	42	0	0
Chester	5	441	996	4	10	0
Chichester	5	118	—	1	5	0
Clonmel	4	521	1,442	13	5	0
Colchester	32	2,257	5,860	45	6	11
Cork	20	2,019	2,673	23	5	2
Coventry	2	340	777	9	9	7
Curragh	54	4,132	11,525	53	9	0
Demerara	2	941	120	2	0	0
Devonport	26	4,092	6,246	27	18	4
Dorchester	1	462	705	4	12	6
Dover	25	2,865	4,637	24	8	4
Dublin	69	7,351	9,280	82	15	0
Dundalk	7	514	2,105	15	18	0
Edinburgh Castle	10	1,471	2,665	21	16	7
Edinburgh, Piershill	3	1,095	1,750	13	13	0½
Enniskillen	3	743	1,975	9	12	5
Exeter	—	408	—		—	
Fermoy	18	2,019	4,677	26	18	0
Fort Beaufort	6	676	1,441	17	3	2

Station.	No. of Companies.	No. of Volumes in the Library 31st March 1868.	No. of Volumes circulating during the Year 1867-8.	Contributions from Recreation Room Funds. £	s.	d.
Fort George, N.B.	6	442	1,873	8	12	6
Fredericton, N.B.	10	841	3,346	10	0	0
Gibraltar	50	5,709	10,599	70	18	4
Glasgow	5	1,550	3,376	15	13	0
Graham's Town	10	489	1,646	23	1	10
Guernsey	3	1,244	691	7	11	7
Halifax, N. S., Citadel	10	1,202	4,121	19	3	0
Halifax, N.S., Wellington Barracks	10	1,172	5,878	19	0	0
Hamilton, Canada	10	1,118	2,066	12	5	6
Hamilton, N.B.	4	494	1,361	12	4	0
Hong Kong	15	2,067	3,450	24	3	0
Horfield	5	159	106		—	
Hounslow	6	653	3,409	21	0	0
Ipswich	—	533	—		—	
Isle of Man	Detachm^t	488	394	1	2	9
Jamaica	19	2,234	3,689	27	13	6
Jersey	5	1,126	3,100	14	3	0
Kilkenny	5	828	2,630	12	0	0
King William's Town	14	1,629	1,270	21	17	6
Kingston, Canada	10	1,304	1,354	19	8	0
Kinsale	6	691	700	5	0	0
Leeds	4	292	105	1	0	0
Limerick	13	2,600	3,507	22	11	0
Liverpool	—	343	—		—	
London (Tower)	Warders	498	569	1	19	4
London, Canada	—	700	—		—	
Londonderry	3	320	702	6	1	10½
Longford	2	490	911	5	2	6
Maidstone	2	804	1,685	11	3	0
Malta	60	6,312	11,926	62	10	0
Manchester, Hulme Barracks	5	785	217	13	18	6
Manchester, Salford ditto	10	1,407	4,167	17	13	8
Mauritius	20	2,115	1,490	26	3	0
Melbourne	6	713	2,224	6	0	0
Montreal	47	2,239	7,758	47	0	0
Mullingar	2	858	1,920	10	7	0
Naas	2	85	417	1	0	0
Natal	5½	852	400	3	13	9
Newbridge	11	887	3,019	20	8	0
Newcastle-upon-Tyne	4	775	721	9	14	4
Newfoundland	3	781	2,147	17	9	6
Newry	4	704	2,018	10	4	0
Norwich	2	274	—		—	
Paisley	2	562	747	4	8	6
Parkhurst	13	2,301	11,580	34	18	0
Pembroke	17	2,044	2,711	26	15	0
Perth	2	520	572	6	17	9
Portsmouth	55	6,884	7,417	62	11	3½
Portland	6	341	4,489	12	1	6
Preston	14	1,745	12,279	34	10	7
Quebec	20	1,659	1,913	30	14	3
Sheffield	13	1,682	6,517	22	3	0
Shorncliffe	29	3,796	10,492	30	6	0
Sierra Leone	6	529	154	10	2	11

App. VIII.
No. 1.

Station.	No. of Companies.	No. of Volumes in the Library 31st March 1868.	No. of Volumes circulating during the Year 1867–8.	Contributions from Recreation Room Funds. £	s.	d.
Spike Island	8	1,134	2,613	10	4	2
Stirling	3	1,296	3,086	9	19	6
St. Helena	6	1,219	3,776	16	14	10½
St. John, New Brunswick	11	1,247	6,566	59	3	7
St. Lucia	—	636	—		—	
Sunderland	3	483	373	4	10	8
Sydney	6	2,030	3,197	10	3	6
Templemore	3	1,357	1,832	5	4	6
Toronto, Canada	24	1,140	2,566	34	18	4
Tralee	—	176	—		—	
Trinidad	2	1,116	1,642	12	15	0½
Tynemouth	3	508	252	1	15	0
Walmer	12	1,630	2,930	18	6	8
Warley	6	3,405	5,702	28	6	1
Waterford	5½	807	795	14	13	0
Weedon	4	857	1,927	12	12	7
Weymouth	5	385	1,033	10	11	6
Winchester	15	1,775	9,411	23	8	0
Woolwich	6	689	1,236	16	13	0
Yokohama	10	1,144	800	19	3	0
York	8	1,287	1,000	10	17	6
Total Garrison	1,302	169,669	373,895	2,051	6	8½

Royal Artillery Libraries.

Alderney	1	398	916	2	13	6
Aldershot	2	600	1,623	0	13	2
Barbadoes	1	915	618	1	0	0
Bermuda	2	489	1,193	1	7	0
Dover	7	998	6,809	18	3	10
Dublin	2	1,473	1,218	3	9	6
Gibraltar	8	1,730	4,233	25	0	8½
Halifax, N. S.	3	1,500	3,700	8	5	6
Jamaica	2	407	20	2	0	0
Jersey	1	522	1,023	1	6	9
Leith Fort	1	800	1,972	2	5	8
Malta	8	1,588	6,170	25	4	0
Mauritius	2	710	713	5	5	10
Plymouth	7	1,324	4,656	17	0	4
Portsmouth	5	927	3,739	13	17	5
Quebec	3	977	1,909	14	3	3
Sheerness	5	1,399	8,684	17	0	7
Shoeburyness	4	1,038	5,715	24	16	2
Shorncliffe	3	977	3,077	0	17	2
St. Helena	2	1,040	2,826	34	5	10
Woolwich, Non-Commissioned Officers	19	5,676	19,950	60	1	5
Woolwich, Gunners		3,969	15,522	2	4	4
Total Royal Artillery	88	29,457	96,286	281	1	11½

Station.	No. of Companies.	No. of Volumes in the Library 31st March 1868.	No. of Volumes circulating during the Year 1867–8.	Contributions from Recreation Room Funds.
Royal Engineer Libraries.				
				£ s. d.
Aldershot	4	692	2,519	5 13 0
Bermuda	3	286	1,129	15 10 0
Chatham	8	2,281	7,848	6 10 6
Dublin	1	2,057	1,172	15 18 0
Guildford	1	1,117	383	4 6 4
Halifax, N.S.	2	548	1,499	11 19 11
Inverness	1	696	412	5 14 11
King William's Town	2	633	2,490	7 5 4
Malta	2	842	2,753	24 16 11
Mauritius	2	791	673	2 13 0
Portsmouth	1	363	84	0 4 0
Southampton	1	1,364	998	14 16 3
Woolwich	2	482	630	3 3 0
Total Royal Engineer Libraries	30	12,152	22,590	118 11 2
Total Garrison	1,302	169,669	373,895	2,051 6 8½
Total Royal Artillery	88	29,457	96,286	281 1 11½
Total Royal Engineer	30	12,152	22,590	118 11 2
General Total	1,420	211,278	492,771	2,450 19 10

App. VIII. No. 2.

Appendix VIII.—No. 2.

Notes on the Working of the Garrison Library and Recreation Rooms at Canterbury for the Year ending the 31st December 1865.

The strength of the cavalry depôt at the above date was 971 of all ranks.

The number of subscribers to the recreation room was 589 (*i.e.* 3 out of every 5 of the garrison were subscribers. In the second report by the Council of Military Education, published on the 1st October 1864, 2 out of every 3 of the garrison were subscribers).

On the 20th March 1866 the number of subscribers was 597, and was composed as follows:

13	officers.
8	staff.
48	sergeants.
56	corporals.
472	privates.
597	

The number of letters written during the year 1865 was 7,300.

The amount of money received at the bar during the year was 103*l.* 15*s.* 10*d.*

The average daily attendance taken for one week was 124.

The expenditure for the library during the years 1865 and 1864 was as follows:

	1865.			1864.		
Expenditure:	£	*s.*	*d.*	£	*s.*	*d.*
Binding and repairs	7	0	5	6	3	1
Purchase of books	9	16	9	7	16	2
Librarian's pay	9	2	6	9	3	0
Stationery	0	13	3	1	2	4
Overcharges for books damaged	0	3	6	1	5	4
	26	16	5	25	9	11

	1865.			1864.		
Receipts:	£	*s.*	*d.*	£	*s.*	*d.*
Contributions	10	10	0	11	0	0
For books lost or damaged	3	10	1	11	12	11
For librarian's pay	9	2	6	9	3	0
	23	2	7	31	15	11

The number of books in the library was 2,478. They were classed as follows:

Class.	Subject.	Number of Volumes.	Number of Times the Volumes were issued during 1865.
A	Books of Reference	51	—
B	Biography	227	5
C	Military and naval	231	178
D	Voyages and travels	312	166
E	Entertainment and fiction	500	4,694
F	Poets and poetry	84	105
G	General literature	526	368
H	Science and natural history	149	57
I	Sacred and serious subjects	155	10
K	Magazines and periodicals	202	358
***	Books to assist in the preparation of lectures and not for general circulation	41	—
	Total	2,478	5,951

The books in class A (books of reference) were not allowed to be taken out of the library.

Of class B (biography) only the following books were taken out during the year:

"The Life of Luther," once.
"The Life of Napoleon Buonaparte," once.
"The Autobiography of a Working Man," once.
"The Life of Philip Musgrave," twice.

Of class C (military and naval)—

"Soldiering in Sunshine and Storm" was taken out 19 times.
"Famous Regiments of the British Army," 9 times.
"Our Soldiers," 7 times.
"The Use and Application of Cavalry in War," 7 times.
"Siborne's Waterloo Campaign," 6 times.
"Medal's of the British Army," 6 times.

Of class D (voyages and travels), the following books were the most in request:

"Shooting in the Himalayas."
"Wild Sports of Southern Africa."
"The Zoolu Country."
"Inglis's Journey through Ireland."
"Discovery and Adventure in the Polar Seas."
"Hudson's Bay, or Every-day Life in the Wilds."

The Canterbury garrison consisting of cavalry depôts and the depôt of the Cape Mounted Rifles a preference was generally shown in classes C and D, for books on "Cavalry and Cavalry Tactics," and "India" and "Southern Africa."

Of class E (entertainment and fiction), the tales and novels of Sir Walter Scott, Bulwer, Dickens, Marryat, Cooper, James, Lever, Ainsworth, Miss Austen, and Grant were the most read.

The library had two complete sets of the works of Sir Walter Scott, of whose novels the "Fair Maid of Perth," (41), "The Pirate," (32), and "The Heart of Mid-Lothian," (31), were the favourites.

App. VIII. No. 2.

The other authors named were not so fully represented, but, judging from the selection made from such of their works as the library possessed, the following seemed to be the most in demand:—"My Novel," (31), "Pelham," (21), "Pickwick," (32), "David Copperfield," (26), "Jacob "Faithful," (21), "Japhet in search of a Father," (25), "Mansfield "Park," (39), "Harry Lorrequer," (23), "Henry of Guise," (23), "The Miser's Daughter," (29), and "Whitefriars," (27).

The book in this class most sought after was Edgar Poe's "Tales of "Mystery and Imagination." There were two copies in the library, and, together, they were taken out 45 times in the course of a year.

Thackeray's "Esmond" was taken out 23 times, whilst "Vanity "Fair" was only taken 13 times. "Maurice O'Twiney, the Soldier "of Fortune," 28 times.

Novels with a sensational title, such as "Matrimonial Shipwrecks," "Marriage," "Destiny," "Nearer and Dearer," "Fatherless Fanny," "The Lottery of Life," "Too Clever by Half," and "The Electric "Telegraph of Fun" were constantly asked for.

Of class F (poets and poetry) "The Ingoldsby Legends," (12), "Burn's Poems," (10), "Baillie's Dramas," (8), "Lalla Rookh," (9), were most read. Then the "Plays" of Ben Jonson (6), and Massingberd and Ford, (5). "Paradise Lost" was taken out 5 times.

Of class G (general literature), "The War," by Russell, (13), "Nar-"rative of the Siege of Lucknow," (11), "Wild Sports of India" (10), "Twelve Years of a Soldier's Life in India," (9), "Four Year's Service "in India," (7), "The Iron Mask," (10), "Canterbury in the olden "Times," (10), and "Politics for the People," (6), were the most read, whilst "The Curse of Britain" was asked for three times, and "Baker "on Intemperance" twice, "Our Drinks," the "Use and Abuse of "Alcoholic Liquor," and "Lectures to Young Men," (3 vols.), were never taken out at all.

Of class H (science and natural history), "Anecdotes of Horses," "Anecdotes of Animals," "The Thunderstorm," "Mines and Mining," "Laws of Motion and Mechanics" were the most read, but neither of these books was taken out of the library more than *four* times.

Of class I (sacred and serious subjects), the following books only were read:—"Philosophy of Religion," (1), "Soldier's Help," (2), "Taylor's Holy living and dying," (1), "Blunt's Lectures on the "History of Jacob," (1), "Butler's Analogy of Religion," (1), "Letters "on Happiness," (2), "Guide to the Lord's Supper," (1), "Companion "to the Bible," (1).

Of class K (magazines and periodicals), the most in demand were Messrs. Chambers Works; the "Penny Magazine" in preference to the "Saturday Magazine," the "Leisure Hour," "All the Year Round," "Sharpe's Magazine," "Cornhill Magazine," and "Bentley's Miscellany."

T. R. Maynard,
Chaplain to the Forces.

Appendix IX.

List of Regimental Recreation Rooms, 1867–8.

Regiment.	Where Stationed.	Number of Rooms.	Refreshments.	Number of Subscribers, Mar. 31, 1868.
1st Life Guards	Windsor.	*		
2nd „	Regent's Park.	*		
Royal Horse Guards	Hyde Park.	*		
1st Dragoon Guards	Aldershot	2	Yes	291
2nd „	Bombay.			
3rd „	Ditto.			
4th „	Aldershot	2	Yes	374
5th „	Colchester	1	Yes	216
6th „	Dublin	1	Yes	434
7th „	Shorncliffe.			
1st Dragoons	Longford	2	Yes	171
2nd „	Dundalk	2	Yes	282
3rd Hussars	Hounslow	2	Yes	312
4th „	Bengal.			
5th Lancers	Ditto.			
6th Dragoons	York	2	Yes	344
7th Hussars	Bengal.			
8th „	Manchester	2	No	126
9th Lancers	Cahir	1	Yes	229
10th Hussars	Newbridge	2	No	329
11th „	Bengal.			
12th Lancers	Dublin	1	Yes	299
13th Hussars	Toronto	1	No	288
14th Hussars	Piershill	2	No	492
	Hamilton	2	No	
	Perth	1	No	
15th Hussars	Birmingham	1	No	299
	Coventry	1	No	
	Norwich	1	No	
16th Lancers	Madras.			
17th „	Brighton	1	Yes	233
18th Hussars	Madras.			
19th „	Bengal.			
20th „	Ditto.			
21st „	Ditto.			
Military Train	Aldershot	3	Yes	357
	Curragh	1	Yes	174
	Dublin	1	Yes	105
	Woolwich	2	No	105
Grenadier Guards, 1st Batt.	London	2	No	477
„ „ 2nd „	Ditto	2	No	673
„ „ 3rd „	Dublin	2	Yes	605
Coldstream Guards, 1st „	Windsor	1	Yes	527
„ „ 2nd „	Chelsea	1	No	396
Scots Fusil. Grds., 1st „	Tower	1	No	680
„ „ 2nd „	Chelsea	1	No	494

* No recreation rooms.

App. IX.

Regiment.	Where Stationed.	Number of Rooms.	Refreshments.	Number of Subscribers, Mar. 31, 1868.
1st Foot, 1st Batt.	Madras.			
„ 2nd „	Bombay.			
2nd Foot, 1st „	Ditto.			
„ 2nd „	Athlone	2	Yes	358
3rd Foot, 1st „	Bengal.			
„ 2nd „	Dublin	1	Yes	272
4th Foot, 1st „	Abyssinia.			
„ 2nd „	Halifax, N.S.	1	Yes	415
5th Foot, 1st „	Bengal.			
„ 2nd „	Dover	2	No	172
6th Foot, 1st „	Bombay.			
„ 2nd „	Edinburgh	2	No	363
7th Foot, 1st „	Bengal.			
„ 2nd „	Bury	1	No	151
8th Foot, 1st „	Malta	2	Yes	456
„ 2nd „	Aldershot	2	Yes	318
9th Foot, 1st „	King William's Town	1	No	152
„ 2nd „	Japan	1	No	449
10th Foot, 1st „	Cape of Gd. Hope	1	Yes	325
„ 2nd „	Madras.			
11th Foot, 1st „	Bengal.			
„ 2nd „	Graham's Town	1	No	192
12th Foot, 1st „	Devonport	2	No	280
„ 2nd „	Bengal.			
13th Foot, 1st „	Gibraltar	1	Yes	470
„ 2nd „	Portland	1	No	423
14th Foot, 1st „	Malta	1	Yes	449
„ 2nd „	Melbourne	1	Yes	186
15th Foot, 1st „	St. John, N.B.	3	No	680
„ 2nd „	Gibraltar	1	Yes	482
16th Foot, 1st „	Montreal	2	Yes	435
„ 2nd „	Barbadoes	1	No	231
	Trinidad	2	No	
17th Foot, 1st „	Curragh	2	Yes	653
„ 2nd „	Toronto	1	Yes	247
18th Foot, 1st „	Chester	1	No	285
„ 2nd „	New Zealand.			
19th Foot, 1st „	Bengal.			
„ 2nd „	Burmah.			
20th Foot, 1st „	Devonport	1	No	171
„ 2nd „	Natal	1	No	354
21st Foot, 1st „	Enniskillen	2	No	262
	Newry	2	Yes	
„ 2nd „	Madras.			
22nd Foot, 1st „	Fredericton	1	No	450
„ 2nd „	Newcastle	1	Yes	149
23rd Foot, 1st „	Bombay.			
„ 2nd „	Newport	1	No	263
24th Foot, 1st „	Malta	1	Yes	544
„ 2nd „	Burmah.			
25th Foot, 1st „	Glasgow	2	Yes	460
	Paisley	2	No	
	Ayr	2	No	

Regiment.	Where Stationed.	Number of Rooms.	Refreshments.	Number of Subscribers, Mar. 31, 1868.
25th Foot, 2nd Batt.	Bengal.			
26th Foot	Abyssinia.			
27th „	Dover	1	No	44
28th „	Belfast	2	Yes	250
29th „	Hamilton, C.W.	2	Yes	612
30th „	Quebec	2	Yes	538
31st „	Malta	2	Yes	461
32nd „	Mauritius	1	Yes	396
33rd „	Abyssinia.			
34th „	Portsmouth	1	Yes	347
35th „	Ditto	2	No	173
36th „	Bengal.			
37th „	Ditto.			
38th „	Ditto.			
39th „	Dublin	2	Yes	177
40th „	Aldershot	2	Yes	349
41st „	Bengal.			
42nd „	Stirling	1	No	152
43rd „	Aldershot	2	No	377
44th „	Kilkenny	1	No	394
45th „	Abyssinia.			
46th „	Bengal.			
47th „	Halifax	1	Yes	356
48th „	Fermoy	2	Yes	309
49th „	Bombay.			
50th „	Sydney	1	Yes	266
51st „	Aldershot	3	Yes	356
52nd „	Limerick	2	Yes	349
53rd „	London, C.W.	2	Yes	346
54th „	Aldershot	2	No	362
55th „	Bengal.			
56th „	Waterford	2	Yes	174
57th „	Aldershot	2	Yes	245
58th „	Bengal.			
59th „	Ceylon	2	Yes	243
60th Rifles, 1st Batt.	Montreal	2	Yes	451
„ 2nd „	Bengal.			
„ 3rd „	Madras.			
„ 4th „	London, C.W.	2	Yes	513
61st Foot	Bermuda	1	Yes	489
62nd „	Cork	2	Yes	655
63rd „	Dublin	2	Yes	267
64th „	Malta	1	No	346
65th „	Kinsale	2	Yes	297
66th „	Jersey	1	No	444
67th „	Curragh	2	Yes	220
68th „	Manchester	1	No	391
69th „	Brantford	1	Yes	396
70th „	Ashton	2	Yes	149
71st „	Fermoy	2	Yes	331
72nd „	Dublin	2	Yes	278
73rd „	Hong Kong	1	Yes	320
74th „	Gibraltar	2	No	341
75th „	Ditto	1	Yes	291

App. IX.

Regiment.	Where Stationed.	Number of Rooms.	Refreshments.	Number of Subscribers, Mar. 31, 1868.
76th Foot	Madras.			
77th „	Bengal.			
78th „	Montreal	1	No	587
79th „	Bengal.			
80th „	Aldershot	2	No	315
81st „	Cork	2	Yes	362
82nd „	Bengal.			
83rd „	Gibraltar	1	Yes	406
84th „	Jamaica	2	Yes	425
85th „	Curragh	2	Yes	491
86th „	Mauritius	1	Yes	458
87th „	Malta	2	No	427
88th „	Bengal.			
89th „	Dublin	1	Yes	337
	Mullingar	2	Yes	
90th „	Bengal.			
91st „	Madras.			
92nd „	Bombay	2	Yes	509
93rd „	Bengal.			
94th „	Dover	1	No	—
95th „	Bombay.			
96th „	Ditto.			
97th „	Portsmouth	2	Yes	346
98th „	Aldershot	2	Yes	405
99th „	Cape Town	1	Yes	223
	St. Helena	1	No	
100th „	Montreal	2	Yes	445
101st „	Bengal.			
102nd „	Madras.			
103rd „	Bengal.			
104th „	Ditto.			
105th „	Ditto.			
106th „	Ditto.			
107th „	Ditto.			
108th „	Bombay.			
109th „	Bengal.			
Rifle Brigade, 1st Batt.	Ottawa	1	No	602
„ 2nd „	Devonport	2	Yes	369
„ 3rd „	Bengal.			
„ 4th „	Weedon	1	Yes	329
West India Regiments, 1st	Bathurst	1	Yes	61
	Sierra Leone	2	Yes	246
„ „ 2nd	Cape Coast Castle	2	No	23
„ „ 3rd	Jamaica.			
„ „ 4th	Barbadoes	2	Yes	95
Ceylon Rifle Regiment	Ceylon	1	Yes	604
	Hong Kong	1	No	169
Cape Mounted Riflemen	King Wm's. Twn.	1	No	90
Royal Canadian Rifle Regiment	Chambly	1	No	65
	Isle Aux Noix	1	No	78
	Kingston	2	Yes	283
	St. John, C.E.	1	No	111
	Newfoundland	1	No	125

Regiment.	Where Stationed.	Number of Rooms.	Refreshments.	Number of Subscribers, Mar. 31, 1868.
Royal Malta Fencible Artillery	Malta.	*		
Commissariat Staff Corps	Aldershot	2	Yes	134
	Dublin	1	Yes	57
Military Store Staff Corps	Woolwich	1	No	70
Military Labourers	Barbadoes	1	Yes	174
Depôt Battalions, 1st	Chatham.	*		
„ 2nd	Ditto.	*		
„ 3rd	Ditto	2	Yes	279
„ 4th	Colchester	2	Yes	374
„ 5th	Parkhurst	2	Yes	555
„ 6th	Walmer	2	Yes	344
„ 7th	Winchester	2	Yes	396
„ 8th	Colchester	3	Yes	545
„ 9th	Preston	3	Yes	856
„ 10th	Shorncliffe	1	Yes	302
„ 11th	Gosport	2	Yes	622
„ 12th	Shorncliffe	1	Yes	521
„ 13th	Pembroke	2	Yes	498
„ 14th	Sheffield	2	Yes	503
„ 15th	Aberdeen	1	Yes	280
	Fort George	1	No	133
Cavalry Depôt	Canterbury	2	Yes	723
Royal Horse Artillery.				
C Brigade	Aldershot	2	Yes	234
Ditto B Battery	Dorchester	1	No	138
Depôt	Maidstone	1	No	147
Royal Artillery.				
1st Brigade	Halifax	1	No	113
2nd „	Mauritius	1	No	99
3rd „	Montreal	1	Yes	178
4th „	Toronto	1	No	226
5th „	Madras.			
6th „	Portsmouth	2	Yes	234
7th „	Plymouth	2	Yes	208
	Pembroke	1	No	113
8th „	Bengal.			
9th „	Dublin	2	No	96
10th „	Malta	2	Yes	290
11th „	Shorncliffe	2	No	250
12th „	Gosport	1	Yes	348
13th „	Dover	2	Yes	205
14th „	Bombay.			
15th „	Gibraltar	2	No	379
16th „	Bengal.			
17th „	Woolwich.			
18th „	Bombay.			
19th „	Bengal.			
20th „	Madras.			
21st „	Bombay.			

* No recreation rooms.

App. IX.

Regiment.	Where Stationed.	Number of Rooms.	Refreshments.	Number of Subscribers, Mar. 31, 1868.
22nd Brigade	Bengal.			
23rd „	Madras.			
24th „	Bengal.			
25th „	Ditto.			
Depôt Brigade—				
1st Division	Sheerness	2	Yes	430
3rd „	Warley	2	Yes	485
Detached Batteries	Alderney	1	No	70
	Aldershot	1	No	143
	Ballincollig	2	No	56
	Barbadoes	2	No	56
	Bermuda	2	No	108
	Devonport	2	No	142
	Fort George	1	No	21
	Guernsey	1	No	52
	Hochelaga	1	No	127
	Jamaica	1	No	68
	Jersey	1	No	67
	Kingston	2	Yes	144
	Leith Fort	1	No	117
	London, C.W.	1	Yes	153
	Newfoundland	1	No	86
	Quebec	2	Yes	228
	Shoeburyness	1	No	231
	St. Helena	1	No	136
	St. Helen's Island	2	Yes	74
	Tynemouth	1	No	14
	Woolwich—			
	Non-commis. officers	1	No	718
	Gunners	1	No	330
Royal Engineers.	Aldershot	2	Yes	384
	Bermuda	1	No	101
	Chatham	2	Yes	522
	Curragh	1	Yes	100
	Dover	1	No	82
	Dublin	1	No	10
	Halifax	1	No	143
	King William's Town	1	No	84
	Malta	2	Yes	186
	Mauritius	1	No	79
	Point Levis	2	No	160
	Portsmouth	1	No	43
	Southampton	1	No	73
	Weymouth	1	No	88
	Woolwich	1	No	62
	Total			59,647

LONDON:
Printed by GEORGE E. EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

PALL MALL

THIRD GENERAL REPORT

BY THE

COUNCIL OF MILITARY EDUCATION.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1869.

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CONTENTS.

REPORT.

		Page
I.	Constitution and Duties of the Council	3
II.	Examiners, Professors, and Masters appointed since 1864	4
III.	Direct Appointments to the Staff	4
IV.	Staff College, admission to	5
V.	„ course of study	6
VI.	Advanced Class of Royal Artillery Officers	6
VII.	Royal Military Academy, admission to	13
VIII.	„ „ course of instruction	16
IX.	Royal Military College, admission to	17
X.	„ „ course of instruction	18
XI.	Direct Commissions	20
XII.	Commissariat Department	23
XIII.	Examiners' Reports	24
XIV.	Instruction of Officers	35

APPENDIX.

I.	Professors and Masters appointed since date of last Report	38
II.	Officers examined for direct appointment to the Staff	39
III.	Staff College Regulations	39
IV.	Returns of Examinations for admission to the Staff College	45
V.	Returns of Final Examinations at the Staff College	49
VI.	Copies of Examination Papers set to Commission Class, Royal Military College	57
VII.	Regulations for Royal Military Academy, Royal Military College, and Direct Commissions	64

THIRD GENERAL REPORT

BY THE

COUNCIL OF MILITARY EDUCATION.

I.

The Council of Military Education have the honour to submit to His Royal Highness the Field Marshal Commanding in Chief, and to the Secretary of State for War, their Third Report on the state and progress of the education of officers of the army, up to the 31st December 1868.

The system of military education as regulated by the Council has now been in operation for more than eleven years. During that time much of what was necessarily experimental has been changed, and the original provisions have received numerous additions and modifications, of which experience alone could show the expediency.

The last Report of the Council contained their proceedings up to the end of 1864, since which date many modifications (which will be noticed in their proper places) have occurred.

The constitution of the Council itself remains the same as it was at the date of the last Report, with the exception of the application to the military members of the rule which limits the duration of military appointments to the term of five years.

The following changes have taken place in the Council since the year 1864 :—Major-General F. W. Hamilton, C.B., resigned his appointment in April 1866, and was succeeded by Major-General William Napier, the present Vice-President. In 1865, Colonel Addison, having been removed by the action of the above-mentioned rule, was succeeded by Colonel E. H. F. Pocklington. In April 1866, Colonel Elwyn, R.A., having been removed by the same rule, was succeeded by Colonel E. B. Hamley, C.B., R.A. Major-General Sir F. Abbott was removed on the 31st December 1868 by the same rule, and was succeeded by Colonel H. D. Harness, C.B., of the Royal Engineers.

The duties of the Council remain precisely the same as at the date of their last Report.

One important and very onerous portion of them consists in making arrangements for and superintending the various examinations held at Chelsea Hospital, for admission to the several colleges as well as for Direct Commissions.

These examinations occupy about 75 days in the year, and one member of the Council at least is invariably present at them.

The periodical examinations at the colleges are conducted under the supervision of the local authorities, but the questions are prepared by the Council's examiners, and the returns are made up in their office.

The examination papers, which amount to nearly 300 a year, exclusively of those connected with army schools and schoolmasters, are always submitted to the Council for revision before they are printed.

The following table shows the number of candidates examined under the direction of the Council since their first establishment, and reported

REPORT. II. Examiners.

on by the Council to His Royal Highness the Field Marshal Commanding in Chief:—

For direct commissions	5807
For admission to Royal Military College	2299
For admission to Royal Military Academy	2859
For admission to Staff College	346
For admission to Military College, Addiscombe	97
For direct appointment to the Staff	136
For Commissariat Department	144
For Commissions from the Royal Military College	1794
For Commissions from the Royal Military Academy	833
For Commissions from the Military College, Addiscombe	71
At Staff College	315
For admission to Advanced Class and at the final examinations of the class	54

II.

APPOINTMENTS OF EXAMINERS UNDER THE COUNCIL, AND OF PROFESSORS AND MASTERS AT THE MILITARY COLLEGES.

The alterations in the list of examiners since the date of the last Report have been as follows:—

Natural Sciences.—Mr. Warington Smyth having resigned was succeeded by Professor Morris, F.G.S.; and on the death of Mr. Woodward, in 1865, Mr. H. W. Bristow, F.R.S., was appointed to the vacancy.

Fortification.—Lieut.-Col. Scott, R.E., having been compelled by the pressure of other duties to resign the examinership in this subject, was succeeded by Lieut.-Col. De Butts, R.E., since whose removal to China the office has been held by Lieut.-Col. C. S. Hutchinson, R.E., assisted at the final examination of the Staff College by Lieut.-Col. G. A. Milman, R.A.

Military History.—Major Battersby having joined his regiment in India, Major Colley, Brigade Major at Devonport, accepted the post of examiner.

Military Legislation.—Colonel Laye, Deputy Judge Advocate General, London, has been appointed examiner in this subject.

The Council continue to receive from all their examiners those valuable services and assistance which were cordially acknowledged in their last Report.

APPOINTMENT OF PROFESSORS AND MASTERS AT THE MILITARY COLLEGES.

The appointments of professors and masters at the several Military Colleges since the date of the last Report are stated in Appendix No. I.

III.

EXAMINATION OF OFFICERS FOR DIRECT APPOINTMENT TO THE STAFF.

The officers who are now examined for direct Staff appointments are almost exclusively Assistant Military Secretaries and Aides-de-camp, constituting the personal Staff of General Officers. Occasionally an officer of the Guards is examined for the post of Brigade Major of the Division, but with this exception the whole of the minor Staff appointments, such as Brigade Major, Deputy Assistant Adjutant-General, and Deputy Assistant Quartermaster-General, have for many years been given to officers who have qualified at the Staff College, while the higher Staff appointments are seldom conferred on officers under the rank of substantive Lieut.-Colonel, for whom no examination is required.

Few of these higher appointments have yet been bestowed on officers who have passed through the Staff College; chiefly because

these have not yet attained sufficient military rank to enable them to hold such appointments. The Council, however, believe that the claims of the few officers who are qualified for such appointments will not be overlooked.

The names of the officers who have passed for direct Staff appointments since the date of the Council's last Report are given in Appendix No. II. The number of candidates reported qualified was as follows:—

In 1865	12
„ 1866	12
„ 1867	9
„ 1868	13
Total	46

Four of these, however, were examined a second time. Six other officers failed, and have not been re-examined.

It has recently been decided that the examination for the appointment of Assistant Military Secretary shall be confined to the subjects laid down in the Queen's Regulations for Aides-de-camp; viz., Field Fortification, Field Sketching, and one Modern Language.

The examination originally laid down in the General Order dated 5th March 1859, for the appointment of Assistant Adjutant or Quartermaster-General, has also been considerably modified.

The paragraph requiring a candidate for either of these appointments to be examined in Elementary Mechanics is omitted in the revised edition of the Queen's Regulations and Orders for the Army, issued on the 1st January 1868; and he is merely required to pass an examination of a higher order in the subjects laid down for the appointment of Deputy Assistant Adjutant or Quartermaster-General.

IV.

Examination of Officers for Admission to and for Qualification at the Staff College.

The Staff College still consists of 30 students, four of whom may belong to the Royal Artillery, the remainder to the Cavalry, Guards, and Line. Occasionally one or two officers of the Royal Marines are admitted as supernumeraries. The regulations of the College are inserted in the Appendix No. III.

The period of service, namely, three years, which was originally considered necessary to render an officer eligible to present himself for examination for admission to the Staff College, was raised in 1866 to five years, exclusive of leave of absence other than that usually accorded to officers every year. It is still found that the majority of the competitors are Lieutenants, and that consequently many of the officers who annually qualify for employment on the Staff are by their rank temporarily debarred from holding the appointments, such as Brigade Majorships, to which they might otherwise be nominated.

The Council regret that officers of more standing in the service do not come forward to compete for admission to the College.

Very stringent rules have been devised for the guidance of those officers on whom the duty devolves of recommending candidates for admission to the Staff College, and it is of the utmost importance that the qualifications demanded should be rigidly scrutinized before such recommendation is made. Wherever this rule has failed of its effect, and officers appointed from the College to the Staff of the army appear inefficient, it should be remembered that the Council can have no influence in the selection for admission beyond ensuring the requisite

educational proficiency, and can only, in the absence of any provision for subsequent tests of military or physical fitness, make the best of the material which the regiments supply.

The Council believe, however, that the majority of the officers who pass successfully through the College are well fitted for the Staff, and that many of them are undoubtedly very valuable officers.

During the four years 1865–8, 113 candidates presented themselves for examination, of whom 81 were examined in London and 32 abroad. Very nearly 60 per cent. of the former gained admission to the College, but only 50 per cent. (exactly) of the latter. The difference may fairly be accounted for by the want of tutors and of suitable books which is experienced in India and the Colonies.

The percentage of candidates who were disqualified, during the seven years preceding 1865, by failure in some obligatory subject, was fully 25 ; but during the four years upon which the Council are now reporting the percentage of absolute failures has fallen to 19·5.

In Appendix No. IV. will be found tables of the results of the examination for admission to the Staff College in continuation of those inserted in the Council's last report.

V.

COURSE OF STUDY.

Some modifications in the course of study have been introduced since the date of that report, namely,—

(*a.*) The subject of Mathematics has been divided into two courses, either, or both, of which may be taken up at the option of the student as a separate subject.

(*b.*) A student who at the probationary examination at the end of the first year gains three-fourths of the marks allotted to any of the voluntary subjects, or to the "obligatory" language which he may have selected, is considered as finally examined in such subjects.

(*c.*) Qualification for the Staff may now be gained on five subjects instead of seven; but in addition to these five, a student may, if he pleases, select any other two for *position* in the order of merit.

The above modifications were all introduced with the view of lessening the strain upon the minds of the students, and are no doubt an improvement on the former system.

The parts of a subject which are already sufficiently mastered to form a basis for a fresh advance are thus finally disposed of, and the time which would have been otherwise occupied in re-studying them for examination is more profitably used in acquiring a more extended knowledge of the same branch of study.

The five subjects on which qualification may be gained are as follows, and the maximum of marks represents the total number gained from all sources (whether examinations, essays, or other work done at the College) throughout the two years' course :—

	Maximum of marks.	Minimum allowed to count.
Fortification and Artillery	600	300
Military Drawing and Surveying	350	350
Reconnoissance	350	
Military History	600	300
Military Administration and Legislation	600	300
French, German, or Hindustani	400	200

Every candidate is required to obtain an aggregate of 1,800 marks on the above five subjects.

The details of the course of instruction remain the same as those explained at some length in the last Report, the only change being the introduction in Military Drawing of Lieut.-Colonel Scott's scale of shade, according to which ground is represented by horizontal hachures graduated according to the degree of slope, and based on a system of contours. The introduction of this system in all the Military Colleges can hardly fail to produce a good effect by securing such uniformity of representation as will render any plan of ground intelligible in all its details to the instructed eye, and portions of the same ground, which may be executed by different hands, coherent parts of the whole.

In Appendix No. V. will be found the results of all the examinations of Officers on quitting the College which have been held since those inserted in the last Report. The following is an abstract :—

Date.	Passed.	Failed.
December 1865	15	—
„ 1866	18	1
„ 1867	15	—
„ 1868	13	—
Total	61	1

In the earlier regulations of the Staff College any officer was, 1st, allowed to compete at the annual final examination without having studied at the College ; 2nd, if he wished to remain there one year only he was permitted to present himself at the probationary examination of the junior division without previous residence, provided a vacancy existed in the senior division; and, 3rd, any student belonging to the junior division might compete at the final examination of the senior division. But these provisions, after being variously modified, were omitted from the Regulations of 1866.

This was done on various considerations. The first class of officers, being required to pass a much slighter examination, were not qualified in the same degree as those who passed through the College, nor was it found in general that the saving of a year's instruction to those of the second and third classes was an object of sufficient importance to compensate for the confusion thus created in the College system, and the necessary incompleteness of their military education.

In their second General Report the Council noted in terms of high commendation the improved system of Reconnoissance introduced by the Commandant of the Staff College, and they have now to express their regret that, owing to the necessary vote having since been considerably curtailed in the estimates, this system has of late been only partially carried out.

On the whole the Council are confident that the changes made have had a good effect, and have tended to obviate the complaint that the course pressed too hardly on the students, at the same time that they have rendered the system of education more complete and practical than it was before.

VI.

Artillery Advanced Class.

This class has made very satisfactory progress. The students admitted in 1864 were finally examined in March 1866, and with the following result :—

REPORT of the Final Examination of Officers of the Advanced Class, Royal Artillery, March 1866.

Order.	Names.	Index Number	Mathematics.				Physics.			Steam Engine, &c.	Chemistry.	Metallurgy.	Professional Subjects.						Grand Total.	Remarks.
			Mechanics and Hydrostatics.	Didion's Traité de Balistique.	Total obligatory.	Didion's Traité (voluntary).	Electricity.	Heat.	Total.				Royal Carriage Department.	Gunpowder and Gun Cotton.	Royal Laboratory Department.	Royal Gun Factories.	Royal Small Arms Department.	Total.		
	Maximum -	..	600	400	1,000	150	150	150	300	200	400	300	200	100	300	300	100	1,000	..	
	Minimum -	..	..	..	400	..	50	50	100	66	133	100	80	40	120	120	40	400	..	
1	Captain Wardell - -	4	423	333	756	113	87	123	210	109	240	215	175	96	273	274	96	914	2,557	Recommended for certificates of qualification.
2	Lieutenant Nolan - -	7	409	272	681	95	83	135	218	122	340	265	167	76	232	244	84	803	2,524	
3	Captain Brown - -	3	342	236	578	65	107	119	226	136	345	250	180	83	264	270	91	888	2,488	
4	Captain Close - -	2	315	228	543	..	69	82	151	83	310	205	176	88	250	261	86	861	2,153	
5	Captain Smith - -	5	297	180	477	..	81	102	183	120	305	255	167	71	233	237	77	785	2,125	
6	Captain Stoney - -	6	289	194	483	..	68	99	167	82	265	215	172	73	236	228	84	793	2,005	
	Major Govan -	1	Sick Certificate.				57	69	126	67	245	185	177	72	211	225	64	749	1,372	

Nearly one half of the examination was devoted to professional subjects relating to the several Manufacturing Departments of the Royal Arsenal, and the other papers in Mechanism, Metallurgy, Physics, Chemistry, and Mathematics were all of a more or less practical nature.

The examination was very satisfactory with a single exception. One officer who fell sick on the first day of the examination in Mathematics, was unable to answer any of the questions set in that subject. The Council consented to his being examined subsequently on fresh papers, and on his passing the examination, they recommended that he should be deemed qualified for appointment to the Ordnance Staff.

The Council also recommended that the letters P. A. C. (passed advanced class) should be placed after the names of these officers in the Army List, and this was accordingly done.

A second batch of candidates for this class, nine in number, presented themselves for examination on the 9th January 1866, and of these seven were found qualified for admission.

The results of the examination are shown in detail in the following table.

EXAMINATION of Candidates for admission to the Advanced Class, February 1866.

Order.	Index Number.	Rank and Names.	Plane Trigonometry, Co-ordinate Geometry, and Calculus.	Practical Mechanics.	Total Mathematics.	Chemistry.	Physics.	Total.	Remarks.
		Maximum -	*350*	*350*	*700*	*150*	*150*	*1,000*	
1	3	Capt. Morgan, J. P. - -	282	245	527	93	105	725	Admitted to the Class.
2	2	Lieut. Jones, C. - -	242	246	488	60	98	646	
3	7	Lieut. Sladen, J. - -	240	236	476	45	51	572	
4	8	Lieut. Morley, C. - -	235	217	452	56	54	562	
5	4	Capt. Ford, A. - - -	278	189	467	25	41	533	
6	6	Lieut. Bainbridge, E. -	178	245	423	45	58	526	
	1	Lieut. Walkey, R. - -	242	219	461	20	45	526	
	5	- - - -	73	194	267	80	70	417	Not qualified.
	9	- - - -	104	172	276	22	61	359	

It was decided that in future the examination in French should be omitted, as the examination for admission is not a test of general education, but of special attainments of which the French language is not necessarily one. The Council considered it to be sufficient that the candidates should prove their ability to read scientific works in that language.

In the year 1866 it was suggested that in order to lighten the labour of the class the course should be divided into two parts, and that a

considerable portion of the course should be disposed of finally at the end of the first year, and it was then decided that every officer should, at the final examination of each year, be required to obtain for qualification one-half of the maximum of marks assigned to the subjects termed professional, and four tenths of the maximum allotted to every other subject, including mathematics; while as a minimum aggregate, six tenths of the entire number of marks assigned to each final examination must also be obtained for qualification.

The examination on the first year's course accordingly took place in March 1867, with the following satisfactory result:—

FIRST Year's Examination of the Advanced Class, April 1867.

Order.	Rank and Name.	Index Number.	Mathematics.	Mechanism and Steam Engine.	Metallurgy.	Chemistry.	Professional Subjects.		Total.	Remarks.
							Royal Gun Factories.	Royal Laboratory, Part I.		
	Maximum -	..	*1,000*	*300*	*300*	*500*	*600*	*400*	*3,100*	
	Minimum -	..	*400*	*120*	*120*	*200*	*300*	*200*	*1,360*	
1	Capt. Morgan, J. P. -	1	879	263	240	440	483	329	2,634	Qualified.
2	Lieut. Sladen, J. -	3	922	170	200	425	467	325	2,509	
3	Lieut. Jones, C. -	4	725	281	245	395	494	335	2,475	
4	Capt. Ford, A. -	2	918	245	200	300	464	325	2,452	
5	Lieut. Morley, C. -	6	725	206	220	380	472	330	2,333	
6	Lieut. Bainbridge, E. -	7	676	198	225	350	449	327	2,225	
7	Lieut. Walkey, R. -	5	579	219	215	380	479	314	2,186	

The final examination on the second year's course was held in March 1868, and the results are tabulated on the next page, the position of each officer being determined by the addition of the marks he gained in March 1867 to those assigned to him at the second examination.

FINAL Examination of the Advanced Class, March 1868.

Order.	Rank and Name.	Index Number.	Mathematics.					Physics.			Chemistry.	Metallurgy.	Professional Subjects.					Total.	Marks brought forward from 1st year's examination.	Total.	Remarks.
			Statics.	Dynamics.	Hydrostatics & Ballistic Instruments.	Didion, Traité de Balistique.	Total.	Electricity.	Heat.	Total.			Royal Laboratory.	Gunpowder and Gun-cotton.	Royal Carriage Department.	Royal Small Arms Department.	Total.				
	Maximum -	..	250	250	250	250	1,000	150	150	300	500	300	320	170	340	170	1,000	3,100	..	6,200	
	Minimum -	..	..	..	..	..	400	..	..	120	200	120	160	85	170	85	500	1,860	..	..	
1	Captain J. P. Morgan -	1	210	231	227	216	884	83	110	193	400	210	250	129	289	138	806	2,493	2,634	5,127	Qualified.
2	Lieutenant J. Sladen -	3	210	237	195	222	864	80	78	158	410	265	255	125	260	124	764	2,461	2,509	4,970	
3	Lieutenant C. Jones -	4	183	194	206	204	787	105	79	184	415	250	274	142	286	136	838	2,474	2,475	4,949	
4	Captain A. Ford - -	2	199	198	203	231	831	67	84	151	355	205	269	140	277	129	815	2,357	2,452	4,809	
5	Lieutenant C. Morley -	6	148	163	161	164	636	90	92	182	385	215	266	113	274	132	785	2,203	2,333	4,536	
6	Lieutenant E. Bainbridge	7	144	166	155	222	687	84	67	151	365	225	245	129	259	130	763	2,191	2,225	4,416	
7	Lieutenant R. Walkey -	5	149	146	119	170	584	87	67	154	415	260	260	133	259	145	797	2,210	2,186	4,396	

REPORT.
VI.
Advanced Class.

Accompanied by Dr. Percy, F.R.S., and by Major Young, the Director of Studies, the advanced class has had the advantage of visiting the various mining districts and principal metallurgical works in England, and of witnessing the processes to which iron and other metals are subjected, from the extraction of the ore to their conversion into useful forms, including, in the case of iron, armour plates and rifled guns; the manufacture of steel; the production and smelting of lead and copper, and numerous other interesting operations.

Under the guidance of Major Young they have also visited the Elswick, Lowmoor, and other similar works, and acquired a practical knowledge of the machinery employed at those establishments.

The Council consider the advanced class very fortunate in having the Rev. J. Woolley, LL.D., Director of Education for the Admiralty, for their examiner in Practical Mechanism and the Steam Engine, and Mr. Stokes, Professor of Lucasian Mathematics at the University of Cambridge, for their examiner in Physics.

The officers of the second class enjoyed the great advantage of witnessing and assisting in Professor Bashforth's experiments at Shoeburyness, undertaken with the sanction of the War Department, in order to ascertain more accurately the law of retardation of projectiles, a task which Mr. Bashforth has been able to perform in a most satisfactory manner by means of the chronograph he has invented and perfected since his appointment as Professor of Mathematics to the advanced class.

On the 9th January 1868, His Royal Highness the Duke of Cambridge, Colonel of the Royal Artillery, issued a regimental circular, pointing out that of the seven officers who passed the final examination in March 1866, six had received Staff appointments, as follows :—

Captain F. Close, Assistant Superintendent, Royal Carriage Department.
„ C. O. Browne, Captain Instructor, Royal Laboratory.
„ W. H. Wardell, attached to the Ordnance Select Committee.
„ F. M. Smith, Assistant Superintendent, Waltham Abbey.
„ F. S. Stoney, Captain Instructor, Royal Gun Factory.
Lieutenant J. P. Nolan, Special Service in Abyssinia.

and stating that in all first appointments to special employments of a scientific character, preference would in future be given to officers specially recommended as having passed the advanced class with credit.

The Council concur in the hope expressed by His Royal Highness that the encouragement thus given will induce more officers of the regiment of Artillery to become candidates for admission to the class.

In March 1868 the third batch of candidates for admission to the class (seven in number) presented themselves for examination. They all passed; but one of them, Lieutenant Roberts, who had been examined in India, afterwards withdrew, as he could not reach England until several months after the commencement of the course.

The following table shows the result of the third examination for admission to the advanced class :—

Order.	Rank and Name.	Index Number.	Mathematics. Pure.	Mathematics. Mixed.	Mathematics. Total.	Chemistry.	Physics.	Total.	Remarks.
	Maximum	..	350	350	700	150	150	1,000	
1	Capt. J. C. J. Lowry	1	258	268	526	110	105	741	Qualified and recommended for admission.
2	Lieut. W. H. Auchinleck	4	202	233	435	100	125	660	
3	Lieut. F. Roberts	7	222	236	458	90	110	658	
4	Lieut. A. B. Brown	5	165	232	397	120	110	627	
5	Lieut. J. A. S. M. Davies	6	188	193	381	45	60	486	
6	Lieut. H. A. Barker	3	113	205	318	50	105	473	
7	Capt. W. R. Barlow	2	174	145	319	65	80	464	

This class is at present under instruction at Woolwich, and the Council hope that they may be able, at the termination of the course, to make of it a report no less satisfactory than those which they have made of its predecessors.

VII.

Royal Military Academy.

The examination for admission to the Royal Military Academy remains nearly as it was at the date of the Second General Report of the Council.

Instead, however, of being required to gain one-sixth marks in Geometrical Drawing, candidates are now obliged to obtain, for qualification, one-third of the marks assigned for drawing plane figures of Euclid, and these marks no longer count towards the aggregate; while Free Hand Drawing has been made a separate subject, carrying a maximum of 1,000 marks.

It was found that the candidates were badly prepared in Geometrical Drawing, and that on joining the Royal Military Academy they had much to unlearn. They are now only required to show that they are acquainted with the use of mathematical instruments, and can draw the several problems of Euclid with accuracy, neatness, and to scale.

The new rule regarding Drawing came into operation at the examination held in July 1866.

Another slight alteration took place at the examination of January 1868. A counting minimum was then placed for the first time on the voluntary portion of Mathematics (Section II. of Pure and the Mixed Mathematics).

This latter change was introduced with a view to deter candidates from wasting the time, in acquiring a smattering of the higher subjects, which they might spend with much greater advantage on the obligatory part of the subject. It had indeed been repeatedly pointed out by the examiners that candidates were apt to attempt the higher subjects before they had thoroughly mastered the obligatory portion, upon which a high minimum is required for qualification, and upon a sound knowledge of which the cadets' success at the Royal Military Academy greatly depends.

The anticipation of the Council, that the modifications which they mentioned in their Second General Report as having been made in favour of Classics, would have the effect of bringing up well-prepared candidates from the public schools without the intervention of private

tutors, has not been realized. Judging by the returns which the Council receive from the Horse Guards, of the places of education at which the candidates are prepared, it does not appear that private tuition is considered less necessary now than at the time of the Council's last Report, only one successful candidate having come up direct from a public school during the four years which have elapsed.

A decided increase is, however, observable in the number of candidates who take up Classics as one of their five subjects, as well as in the proportion of those who, taking up Classics, are successful in gaining admission to the Royal Military Academy.

From the following table it appears that whereas prior to 1865 only 40 per cent. of the candidates took up Classics, and only 30 per cent. of those who did so (or 12 per cent. of the whole number examined) were admitted to the Academy, the proportion has in the last four years risen to 47 per cent. examined in this subject, and 38 per cent. of these (or 18 per cent. on the entire number of candidates under examination) returned among the successful competitors.

RETURN showing the number of candidates examined in Classics, and of those who, taking up this subject, were successful competitors, since the examinations for admission to the Royal Military Academy were first placed under the Council.

Date.	Number examined.	Number who took up Classics.	Number of successful Candidates who took up Classics.
July 1859	106	54	17
January 1860	110	53	30
July „	159	69	12
January 1861	231	86	37
July „	247	82	24
January 1862	204	63	11
July „	216	78	21
January 1863	198	83	16
July „	137	56	20
January 1864	141	64	24
July „	116	56	13
January 1865	123	57	21
July „	114	50	21
January 1866	123	61	23
July „	130	61	18
January 1867	125	64	27
July „	123	55	21
January 1868	115	55	27
July „	141	67	23
Total	2,859	1,214	406

The following table gives the result of the several competitive examinations for admission held since the date of the last Report :—

Date.	Number of Candidates examined.	Number of Candidates who qualified.	Proportion of qualified Candidates per cent.	Number admitted to Royal Military Academy.	Remarks.
1865, January -	123	76	62	32	
„ July - -	114	71	62	40	
1866, January -	123	79	64	35	
„ July - -	130	85	65	40	
1867, January -	125	77	61	40	
„ July - -	123	69	56	46	
1868, January -	115	63	54	56	
„ July - -	141	57	40	40	
Total -	994	577	58	329	

From the above table it appears that, on the average of the whole period, 57 per cent. of those who obtained the qualifying number of marks were admitted to the Academy.

The large admission in January 1868 arose from a demand for 40 additional engineer officers for India, who were required within the space of two years from that date. Fifty candidates were also admitted in January 1869, and it appears probable that the strength of the classes must be kept up to an average of 44 cadets for some time to come, in order to meet the demand for officers in the Royal Artillery and Royal Engineers.

From the unusual demand for officers referred to in the last paragraph, and to enable the service to profit at once by the increased number of admissions to the Academy, it was necessary to strengthen the upper classes. Promotion was therefore offered to those cadets who were willing, in consideration of passing through the establishment in four instead of five terms, to submit to a great disadvantage in competing with their seniors at the final examination ; inasmuch as it would practically deprive them of all prospect of gaining such a place on the list as would give them the option of entering the Royal Engineers.

Volunteers having accordingly been called for, an intermediate examination was held in March 1868, and those who proved most qualified for promotion were drafted into the class immediately above them, in such numbers as to complete each class to a strength of 44 cadets.

Having been examined on papers specially set for them, the cadets who thus passed through two classes in one term cannot be placed in competition with other cadets, and therefore are not allowed at their final examination in the first class to count for place the marks they gained at the intermediate examination ; but should they fall short of

the minimum required for qualification such marks may be used to supply the deficiency.

It is found, however, that an intermediate examination of this nature disturbs the course of study in a most inconvenient degree, and the Council therefore are very unwilling to recur to it on any future occasion, when an abnormal demand for officers may be made upon the Academy.

The course decided on in December 1868 for adoption in the ensuing term was to call for volunteers in all classes except the first, and to select from these, according to seniority, the numbers required. These were at once to pass into the next class, and as they would lose the marks they would have gained in the class passed over, the minimum of these marks was to be deducted from the final minimum required for qualification for a commission. Cadets thus promoted were not to be compensated in any other way for the loss of those marks, but, with this disadvantage only, they were to be at liberty to compete with all cadets in their own class.

The present Regulations for the admission of Gentleman Cadets to the Royal Military Academy will be found in App. VII.

VIII.

Course of Instruction at the Royal Military Academy, and Final Examination for Commissions.

The only change which has been made in the course of instruction has been the introduction of the study of Military History. It had long been felt by the superior officers of Artillery and Engineers that the absence of all knowledge of Military History was a defect in the course of study at the Academy, and one calculated to place the establishment in this respect at a disadvantage when compared with the Staff College and the Royal Military College. But the difficulty of adding a subject to the already very comprehensive course was not to be overcome. It was at length determined to substitute Military History for Geology, that being considered the subject which could be dropped out of the course with the least disadvantage to the cadets. Military History is now taught to the 1st and 2nd classes by means of one lecture per week to each.

The Council would be glad to be able to make some reduction in the number of subjects taught at the Royal Military Academy, but for the reasons stated in their last Report they have not yet found such a reduction practicable.

Prior to 1865, the cadets of the 3rd, 4th, and 5th classes were examined in Mathematics at the end of each term upon the whole of the course which they had read. This not only caused an unnecessary strain on the mind, but it in some measure kept the cadets from advancing to the higher subjects. In order to obviate these disadvantages, and at the same time to allow of the cadets being more fully examined in each part of the subject, the entire course of Mathematics was in 1865 divided into three parts, and the examination in each part at the end of the term was made final, all marks gained in the 4th and 5th classes being carried forward for final credit in the 3rd class.

A further step was taken in February 1867, by omitting from the course of the 5th class all of Euclid except a small portion.

In the same year the system of disposing of a subject by instalments was extended to Fortification and Artillery.

The following table shows the results of the final examinations of the cadets of the 1st class since the date of the Council's last Report :—

Date.	Strength of Class.	Passed		Still in Royal Military Academy.	Finally failed.	Appointed to the	
		At the time.	At the next final Examination.			Royal Engineers.	Royal Artillery.
1865 June	30	29	1	..	..	10	19
1865 December	38	38	..	..	..	10	28
1866 June	27	27	..	..	..	6	21
1866 December	37	36	1	..	..	6	30
1867 June	29	29	..	..	..	10	19
1867 December	36	36	..	..	..	12	24
1868 June	44*	42*	1	1	..	19*	23
1868 December	43	41	..	..	2	20	21
	284	278	3	1	2	93	185
Deduct failed - - 2							
„ appear twice in first Column - - 3	6					278	
„ still in Academy - 1							
	278						

His Royal Highness Prince Arthur was examined for admission to the Royal Military Academy in January 1867 at the Council's Office, and although not placed in competition with the candidates under examination at Chelsea Hospital, proved himself to be perfectly qualified for admission, according to the rules laid down in the Horse Guards Memorandum of 1st January 1867, and under the identical system of marking applied by the examiners to all other candidates.

His Royal Highness remained three terms only at the Academy, and devoted his attention principally to Artillery, Fortification, and Surveying. In these subjects he passed a searching vivâ voce examination by the Professors in June 1868, in the presence of Major-General Sir F. Abbott, a member of the Council, who expressed himself in the following terms in his Report :—

" The examination being vivâ voce was much more extensive and searching " than it could otherwise have been made within reasonable limits of time; " yet the answers given were, with few exceptions, prompt and accurate; " showing that during an unusually brief course His Royal Highness had " devoted great attention to the instruction given by the able and zealous " professors of the Academy, and proving himself to be well qualified for a " commission in either of the scientific corps of Her Majesty's Army."

IX.

Examination for Admission to the Royal Military College, Sandhurst.

The establishment of this College is limited to 300 cadets, but the number actually present is considerably less. The examination, though nominally competitive, is in reality merely qualifying, as there are generally as many vacancies as there are qualified candidates. The only alteration that has been made in the conditions of the entrance examinations is, that the number of subjects in which a candidate can be examined has recently been limited to five.

The rule came into operation at the examination held in June 1868.

The following table shows the general result of the examination for admission :—

* These numbers do not include His Royal Highness Prince Arthur.

Date of Examination.	Number examined.	Number passed.	Number failed.	Percentage failed.
1865, June - -	145	124	21	14·4
„ December -	115	90	25	21·7
1866, June - -	150	121	29	19·3
„ December -	136	106	30	22·0
1867, June - -	131	106	25	19·0
„ December -	104	85	19	18·2
1868, June - -	100	72	28	28·0
„ December -	114	90	24	21·0
Total - -	995	794	201	20·2

The average number of failures during the last four years is considerably less than in the case of Direct Commissions, although the two examinations are almost identical. The difference may be accounted for by the fact, that during the whole period under report the minimum aggregate of marks required for admission to the Royal Military College was 1,500, while during 1865 and 1866, 1,800 were necessary to qualify a candidate for a Direct Commission.

Only 9 per cent. of all the candidates examined for admission to the Royal Military College were rejected for want of the qualifying aggregate alone, against 15 per cent. in the Direct Commission examinations; but the percentage of those who failed in English alone is considerably higher than in the case of Direct Commissions, being 1·30 against 0·88.

The percentage of failures in Mathematics alone, and of those who failed in one or other of the obligatory subjects, as well as in obtaining the required aggregate of 1,500 marks, scarcely differs at all from the percentage given in Section XI. for Direct Commissions.

X.

Course of Instruction at the Royal Military College and Final Examination for Commissions.

The course has been increased from one year to one year and a half, and the College authorities have frequently expressed their opinion that it is still too short to ensure a practical and tolerably complete military training; in which opinion the Council concur, provided the age for admission be lowered.

A reduction of two instructors has been made since the date of the last Report, namely, one in Mathematics and one in German.

It was found that the system of allowing the cadets to count at the end of each term a certain number of marks which they carried on to their final credit, though attended by the advantage of inducing the cadets to work during their first term, had the effect of encouraging idleness in their subsequent terms; and that whereas under the previous system they were idle during their first and second terms, they now worked only during their first term.

The evil was thus reversed, not cured. It was therefore determined to modify the system in some degree, and to reduce the number of marks to be gained in the first and second terms to such an extent as, while offering an inducement to work during those terms, to render further exertion necessary during the third term; and at the same time

it was decided to institute a qualification at the end of each term for promotion to a higher class, and to rule that any cadet who failed thus to qualify should be removed from the College.

Several minor changes in the system of education have been introduced in Military History, in Fortification, and in Surveying; in the latter subject the use of the new scale of shade being taught to the cadets; all which in the Council's opinion tend towards improvement.

There has not yet been sufficient time to judge of the effect of either of these rules, but an improvement in the general studiousness of the cadets may be fairly expected from them.

It is probable that some further steps may be found necessary, in order to obtain a fair amount of application on the part of the cadets as a body.

The Council, however, cannot under the present circumstances of the Royal Military College anticipate that more than a certain percentage, and that not a large one, will profit much by the opportunities of education which it offers. The qualification is of necessity placed low, to correspond with that demanded for entrance, and to prevent the exclusion from the College of many who now gain some amount of instruction there, and who would otherwise have no means of entering the Army except by the examination for Direct Commissions. The number of prizes in the shape of free commissions being limited to a certain proportion only of those who qualify, the stimulus necessary to excite industry and competition is wanting to all of those who satisfy themselves by the results of earlier examinations that they are not likely to gain them. Nevertheless the Council have still under consideration plans for raising the qualification, and thereby attempting to induce an amount of industry which would have an excellent effect on the general tone of the institution. These and other reforms, such as the reduction of the age for admission, have been postponed, pending the result of the Royal Commission on Education which is now sitting.

In Appendix No. VII. are printed the examination papers used in the competitive examination for commissions without purchase, held in December 1868.

The number of cadets who have obtained commissions without purchase since the last Report, and exclusive of those given to Queen's and Indian cadets, is as follows:—

June 1865	35
December 1865	35
June 1866	30
December 1866	30
June 1867	12*
December 1867	40
June 1868	30
December 1868	39

The present Regulations relative to the admission, education, and military training of the Gentlemen Cadets are inserted in Appendix VII.

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* On this occasion only 40 Gentlemen Cadets were examined, owing to the change from two to three terms, which was introduced by the Regulations of March 1866, in the period of residence at the College.

XI.

EXAMINATIONS FOR DIRECT COMMISSIONS IN THE CAVALRY, GUARDS, AND LINE.

In the year 1866 it was decided to limit the number of subjects in which a candidate might be examined to five, inclusive of the two obligatory subjects, Mathematics and English, the object being to discourage superficial learning, which a great number of subjects was calculated to favour. The qualifying minimum was at the same time reduced to 1,500, and the lower limit of age for entrance to the army was, at the recommendation of the Council, reduced from 18 to 17.

The new rule came into operation at the examination held in May 1867.

The results of the examinations which have taken place since the date of the last Report are shown in the following table :—

Date of Examination.	Number examined.	Qualified.	Unqualified.	Annual percentage of Failures.
1865.				
May - -	161	119	42	—
August - -	98	69	29	—
November -	94	77	17	—
	353	265	88	25·0
1866.				
April - -	151	107	44	—
November -	148	109	39	—
	299	216	83	28·0
1867.				
May - -	148	103	45	—
1st August -	109	90	19	—
8th August -	121	101	20	—
November -	143	112	31	—
	521	406	115	22·0
1868.				
April - -	141	97	44	—
November -	156	127	29	—
	297	224	73	24·5
Total during the above period -	1,470	1,111	359	

Thus the average number of failures during four years has been rather less than 25 per cent.

As the Council observed in their last Report, it is important to point out the subjects failure in which has caused the candidates' rejection, and to ascertain the proportion of failures from each cause.

Besides being required to gain a minimum aggregate of marks (now reduced from 1,800 to 1,500), candidates must obtain for qualification 400 marks in Elementary Mathematics (of which 200 must be gained in Arithmetic), and also 200 marks in English for correct and legible writing from dictation, and grammatical composition.

The following table will show the percentage of unsuccessful candidates rejected from each cause since the date of the Council's last Report, and for the sake of comparison the table of percentages given for 1864 at page 81 of that Report :—

Cause of Rejection.	1865–8.	1864.
Failed in mathematics only -	2·50	0·
„ English only - -	3·63	1·23
„ obtaining required aggregate of marks without failing in any obligatory subject - -	61·00	66·66
„ mathematics and in English - -	0·	0·
„ mathematics and in the aggregate of marks - -	15·60	18·52
„ English and in the aggregate of marks	10·58	9·88
„ mathematics, in English, and in the aggregate of marks - -	6·69	3·71
	100	100

It is evident from the above table that few of the unsuccessful candidates can attribute their failure to the two obligatory subjects, Mathematics and English. In 94 cases out of 100 it was caused either entirely or in a great measure by their inability to gain 1,500 marks upon five subjects having a maximum value of from 6,000 to 10,000 marks, or, prior to 1867, 1,800 upon an unlimited number. This denotes a deficiency of general education, and proves that the rules regarding obligatory subjects are far from being severe.

As the first object in establishing a system of examination for entrance to the army was to ensure a certain amount of intelligence and education among the officers, the principle of eliciting whatever information or educational acquirement the candidate might possess has been chiefly kept in view. A test established on the exclusive ground of a public school education would often deprive those who have been privately educated, or whose training has been special, of the opportunity of exhibiting or turning to account the knowledge they possess.

On the other hand there are certain subjects which no scheme of education can be supposed to omit, since to be ignorant of them would argue a deficiency of mental preparation for which no special acquirements could compensate.

The principle, therefore, of entrance examinations, generally stated, is to present such a choice of subjects that knowledge of any kind will benefit its possessor, but at the same time to render a fair acquaintance with certain indispensable subjects an absolute condition

The following table shows, on an average of 100 candidates, how many took up each subject—

1. During the years 1865 and 1866, when candidates were at liberty to take up as many subjects as they pleased ; and
2. During the two succeeding years, when the number of subjects was limited to five.

The figures given at page 83 of the Council's last Report, for the years 1860 and 1864, are also given for the sake of comparison :—

——	1860.	1864.	1865–6.	1867–8.
Mathematics, obligatory portion	100	100	100	100
„ voluntary „	31	65	64	67
English (obligatory)	100	100	100	100
History	96	96	94	81
Latin	71	69	66	57
Greek	16	23	28	26
French	91	89	91	84
German	13	15	20	12
Natural Science	6	9	11	2
Experimental Science	13	18	29	15
Drawing	75	63	65	32

The falling off in the numbers taking up almost all the voluntary subjects during the last two years is no doubt to be attributed to the limitation now imposed upon the candidates, but it will be observed that this rule has not affected Classics materially, while in the higher portion of Mathematics there is an actual increase of numbers.

The falling off in Drawing is most marked. It is caused partly by the small number of marks allotted to this subject, viz., 600 (which cannot be increased with due regard to the superior claims of other subjects), and partly by the fact that some degree of natural talent for drawing is generally considered necessary for successful cultivation of the art.

Whether the limitation of the number of subjects has been attended with a corresponding improvement in the amount of knowledge that the candidates acquire of those which they do take up, may be seen by comparing the analysis given at page 82 of the Council's Second Report with the following table, in which the column—

(*a*) Represents the percentage of those examined in each subject during the last two years, who failed to obtain the counting minimum, or one-sixth of the whole ;

(*b*) The percentage of those who gained one-sixth but less than one-half marks ; and

(*c*) The percentage of those who obtained more than one-half marks.

It would appear from this comparison that great progress has been made since 1864 in the Obligatory section of Mathematics, in History, Experimental Sciences, and Drawing ; that no change of importance has been made in respect to English, Latin, or German ; and that there is a falling off in the Voluntary section of Mathematics, and in Greek, French, and Natural Sciences.

DIRECT COMMISSIONS.

Subject.	Number taking up each Subject.		Percentage of the Candidates taking up each Subject whose knowledge was					
			Bad or Indifferent (*a*).		Fair (*b*).		Good or Excellent (*c*).	
	1867.	1868.	1867.	1868.	1867.	1868.	1867.	1868.
Mathematics (obligatory)	521	297	8·25	3·70	21·11	21·21	70·63	75·08
,, (voluntary)	338	211	47·92	64·45	45·85	34·12	6·21	1·42
English	521	297	4·60	6·73	86·37	85·85	9·02	7·40
History	427	242	20·14	22·31	67·91	69·42	11·94	8·26
Latin	310	157	22·90	22·29	69·03	66·87	8·06	10·82
Greek	144	69	44·44	39·13	52·77	55·07	2·77	5·79
French	443	251	16·25	28·28	61·62	58·16	22·12	13·54
German	63	35	12·69	20·00	52·38	60·00	34·92	20·00
Natural Sciences	13	5	46·15	60·00	46·15	40·00	7·69	00·00
Experimental Sciences	78	51	28·20	17·64	52·56	62·74	19·23	19·60
Drawing	158	109	23·41	16·51	65·18	74·31	11·38	9·17

The Council consider that the system of examining candidates for direct commissions has had all the effect which could be reasonably expected from it. A certain percentage of young men of more than average ability are thus admitted, and a guarantee is afforded that the officers of the army who enter it in this manner possess on the whole a fair amount of general education.

Since the date of the Council's last Report the University of Glasgow and Queen's University, Ireland, have been included in the list of Universities whose students are qualified for direct commissions without being required to undergo the usual test, provided they have passed the examination necessary for taking a degree in arts.

The rule by which candidates who gain less than a certain aggregate of marks are debarred from presenting themselves for examination again under a given time, was necessarily modified when the minimum aggregate required for qualification was reduced from 1,800 to 1,500 marks.

Those who gain less than 700 are now excluded for twelve months, and those who gain more than 700, but less than 1,200, for six months.

The present Regulations in regard to the Examination of Gentlemen preparatory to their receiving Commissions in the Army will be found in Appendix VII.

XII.

EXAMINATION OF CANDIDATES FOR APPOINTMENT TO THE COMMISSARIAT DEPARTMENT.

The following table shows the number of candidates examined since the last Report :—

Year.	Number examined.		Qualified.		Unqualified.	
	Officers.	Civilians.	Officers.	Civilians.	Officers.	Civilians.
1865	12	—	5	—	7	—
1866	15	—	6	—	9	—
1867	16	—	11	—	5	—
1868	—	1	—	—	—	1
Total	43	1	22	—	21	1

These examinations have been discontinued, no appointment from the Line to the Commissariat Department being now made.

XIII.

EXAMINERS' REMARKS.

The following remarks by the examiners are extracted from their replies to a circular letter, addressed to them by the Council, requesting them to state their opinions severally as to the progress, if any, which is observable of late years in the preparation of candidates for examination, and as to the degree in which the Army Examinations may be supposed to have influenced the general education of the country since 1857, in public as well as in private schools :—

Rev. Canon HEAVISIDE, M.A.

Mathematics.

I began to examine for the Council of Military Education in the year 1858, and have continued one of their examiners to the present time. There can be no doubt that in all our examinations the candidates come up better prepared than they did at first. I think that this progress reached its maximum about three or four years ago, since which time there has been neither permanent advance nor permanent retrogression. The character of all the examinations seems to be well understood by the candidates, and their reading, no doubt, is aided and guided accordingly. For the first year or two the papers were generally more difficult than they now are; but making every allowance for this change of test, I think the candidates now read this subject more thoroughly than they did at first.

With regard to the effect of our examinations on the school education of the country, I should say that these, combined with other examinations such as those of the University of London, the middle-class examinations, &c., have contributed to raise very much the mathematical studies of classical schools. Perhaps the effect is greater in the schools to which the very highest class do not resort, but I should suppose, though I speak without positive knowledge, that even Eton and Harrow have of late years improved in this respect.

At the same time the public schools have great difficulties to contend with in preparing for the Military Examinations, so large a number of the boys at the principal public schools being the sons of men of wealth and of high position.

The natural proneness in human nature to idleness in early life is considerably increased by this circumstance, and I apprehend that a very small percentage of boys collected in large masses in public schools can be induced to devote themselves to continuous study in any subject. Hence to prepare for our military examinations, especially for the more advanced examinations, such as admission to Woolwich, the candidates find it advantageous to their prospects to seek the help of competent tutors, whose instruction is directed to the prescribed subjects and to few pupils at a time, and where the condition of the establishment is such that work is the rule and idleness the exception.

Rev. W. N. GRIFFIN, M.A.

Mathematics.

The results of the examinations in my time have not varied widely, but if improvement can anywhere be observed, I should be disposed to point to the earlier subjects, Arithmetic, Euclid, and Algebra.

I think that the knowledge which the candidates show is generally sound. Instances appear of candidates for qualification attempting to write what they must be conscious of not seeing clearly, but these instances are not frequent.

I have no doubt that the Army Examinations have had great effect in promoting the study of Mathematics in schools. The fact of improvement cannot be questioned by any one who can look back to the amount of Mathematics read, and the manner in which it was read, in our best schools some years ago. Other causes no doubt have operated in the same direction, but I feel sure that the Army Examinations have had their share in making Mathematics a more prominent element in liberal education throughout the country.

Rev. G. RAWLINSON, M.A.

Classics.

Speaking not only from my general impression, but also from a careful examination of my marks, I feel bound to say that *during the last four years* there has been no marked improvement in the work of the candidates at the Military Examinations. The percentage of those who pass has, on the whole, slightly increased; but the percentage of those who obtain *high* marks has decidedly diminished. It is my distinct impression that while more of the candidates who come before me are tolerable classics, a smaller proportion are really good scholars.

With regard to the effect of the Army Examinations, if any, on the general school education of the country, I have had no opportunity of forming a decided opinion. As an occasional examiner of schools I see a continual improvement in methods of instruction, and in the results obtained from them. But I am unable to say how much of this improvement may be owing to the Army Examinations, or how much may be independent of them.

Rev. OSBORN GORDON, B.D.

Classics.

The report which I have now the honour of making to the Council of Military Education will not vary much from the general account of my experience as an examiner which I submitted to the Council some three or four years since; nor do I think there is likely to be any great improvement in the department with which I am concerned.

It is, however, only just to say that the candidates are actually better prepared than when I was first called to act as an examiner eight or nine years ago. I have not preserved statistics of results, but I have sufficient confidence in my own recollections to justify me in making this statement. There were at first, at each examination, a considerable number of men who knew absolutely nothing, and it was difficult to conceive on what grounds they were advised to offer themselves for examination. This number is very much diminished now, and in some cases there is hardly a candidate of whom this can be fairly said. I am speaking here of the candidates for Sandhurst and for direct commissions, for the candidates for Woolwich were always of a higher order, and still maintain their position. Indeed, among these the proportion of those that fail in Latin is sometimes extremely small, and there is always a fair average of men whose work is extremely creditable. In Greek the number of failures is much greater, and last summer I had to complain of the candidates as exceptionally weak in that language. I could not help noticing the fact that on that occasion the examiners in other subjects also gave an unsatisfactory account of the candidates, which agrees with what I have observed at other times, that where the classical part of the examination is good the examination generally is good, and vice versâ.

I think it probable that the examinations for the army, and other positions under Government, will have considerable influence on the general education of the country; and, in fact, the number of inquiries which are constantly addressed to me are evidence that this influence is already felt. The curriculum of studies is gradually being enlarged, and subjects which were hardly noticed 20 years ago have now gained a recognized position, and will become more prominent hereafter. I do not think there is any reason why the old staple of classical education should suffer from this cause, but it may be reasonably hoped that those who make so little progress in Classics now, will show greater aptitude for other subjects. The public schools ought, I think, to give sufficient instruction in all subjects that are required in the ordinary Military Examinations, and I hope the time will come when it will be considered a discredit to any school, that its pupils should have to be sent away to a private tutor to be prepared.

The competition for Woolwich is so keen, that it is probable that candidates who wish to ensure success will always find it necessary to obtain some further assistance beyond what the schools, where instruction is given in classes, can be expected to afford.

G. W. DASENT, ESQ., D.C.L.

English Language, History, Geography.

If I am asked whether the candidates who appear at the Military Examinations come up better prepared in English and English History than was the case when your last Report was issued, I answer, unhesitatingly, yes. The progress may not be so marked in the last few years as it was during the period prior to that Report, and for a very good reason, representing, as it did, progression from almost utter ignorance to comparative information; but still the progress of late years has been decided, and continues in both branches of study. The evidence of this is twofold, external and internal. External I call the attempt made at many of our great schools to teach English and English History as part of their system of education. The example first set, I believe, by Cheltenham, has been followed at several public schools, and even Eton, under her new headmaster, now turns her attention to these studies. The result will be that parents will be ultimately, and perhaps soon, relieved of the necessity of sending their children from the wholesome moral discipline of a public school to the forcing atmosphere of training establishments, which, though they may be wanting in moral supervision, do somehow or other contrive to teach their pupils something. I argue that if means of education are to be found, the public will not be slow to avail themselves of them, and as soon as these means are extensively provided in the educational system of our public schools, that the candidates who present themselves from those schools will be better prepared. I may add that the school which has made English and English History more thoroughly a part of its educational system than any other, is Rugby, where Dr. Temple introduced such a scheme about a year ago.

But the best evidence of progress is afforded by the candidates themselves. There can be no doubt at all that the candidates as a body come up better prepared in English and English History than was the case five or six years ago. Examinations may vary: one at the end of a year may be better than one at the beginning; but looking back at them year after year, the tendency to improvement is unmistakeable. Of course in every examination there is a dull mass of stupidity, represented by a certain percentage of failures. This is an element which will never be wholly eradicated. Out of 100 candidates some will be dunces, and the education of their competitors will only make their ignorance more glaring; but on the other hand, in any examination where we find, as I have done, that the maximum of marks gained is steadily rising, and that a greater proportion of the candidates get high marks, it is impossible to shut one's eyes to the internal evidence of their general superiority to the candidates who presented themselves at a former period.

W. STEBBING, ESQ., M.A.

English Language, History, Geography.

In comparing the results of the several examinations at which I have assisted, I observe a very marked difference between the examinations held within the last four or five years and those of some eight or nine years ago. This difference is not indeed so apparent in respect of style and arrangement, but there is a real increase in the amount of information at the command of these later generations of candidates. This is perhaps more particularly perceptible in English Grammar, of which they show at present considerable knowledge. I can, however, say the same substantially of their English History; and the examinations for admission to the Royal Military Academy exhibit a like encouraging symptom with reference to Geography. The improvement has been less manifest in English Composition, which, except occasionally at the examinations for admission to the Royal Military College, has at no time been very unsatisfactory, and in spelling, which has seldom been ever altogether satisfactory.

During the last few years the general progress, if any, has been more capricious, an examination which has presented extremely respectable results, as, e.g., the examination for admission to Sandhurst of June, 1864, being followed within a year or couple of years by one (e.g., that of June, 1866) signalized by a disproportionate number of failures.

Whether the progress, such as it is, will be maintained, must now depend infinitely more on those who have the training of candidates than on those who examine them. Private tutors do their part very thoroughly even now, unsatisfactory as to a certain extent it necessarily is. But trustworthy permanent results cannot be hoped for unless the preparation for our examinations be taken in hand, systematically, by the ordinary schools of the country. The older schools, with one distinguished exception, have hitherto been the most conspicuous defaulters in this respect. We could not, it may be, have reasonably expected them to go out of their way to have special classes on subjects merely because we allow them to be tendered for examination. It is possible that thus they may have a plausible defence to such charges of inertness and lack of the spirit of progress as might be grounded on the gross blunders not rarely perpetrated by their pupils in Geography. Whatever the practical merits of that subject, especially from a military point of view, it is, they are entitled to urge, too much one of detail, and of too little use for the intellectual development of boys, for it to be worth the while of schools to devote time or pains to it. But a similar apology is by no means available for the grudging attention they bestow on the study of English History. They would scarcely deny that this, besides its practical advantages, can be made, where there is any skill in the teacher, a most serviceable instrument of general education. Above all there is absolutely no excuse for the flagrant ignorance of spelling displayed by many candidates who must nevertheless have enjoyed a regular school training.

Rev. W. KINGSLEY, B.D.

Free-hand Drawing.

There is no subject of education in which it is so difficult for a student to procure good teaching as in drawing; the public in general think it easy for any one to become a good draughtsman, the fact being that it requires a very rare union of various faculties to make a thoroughly good draughtsman, I do not mean artist, for then a man must give his whole life to the subject to succeed properly. A certain and by no means rare combination of mental and bodily powers is needed to enable a man to delineate correctly ordinary objects; but the combination necessary for attaining high skill in the art is so very rare that but few men have ever lived possessing the power of drawing thoroughly. In our own country far too little attention is paid to this subject even in schools of art, and in our public schools it is almost entirely neglected; and, in consequence, masters capable of giving good instruction can seldom be obtained.

The masters in the schools under the "Science and Art Department" are perhaps as good as can be usually found in this country, but I do not consider them fully qualified to instruct candidates for the Artillery and Engineers. The system adopted by that department is well framed for its purpose, but neither masters nor pupils are expected to be highly educated, and mechanical skill is more attended to than intelligent observation.

Amateurs might be thought more likely to fail in the mechanical than the intellectual part of art; experience, however, shows that they also give more attention to the manual than to the mental portions of the subject.

Our public schools appear to me to miss an important part of mental training by supplying boys with nothing to exercise their powers of observation; drawing properly taught would be a means of supplying this deficiency.

Under these circumstances it was not to be wondered at that the candidates for admission to the Royal Military Academy should, as a rule, have been very badly prepared to pass anything like a strict examination in drawing, therefore the papers set required mainly elementary work of a correct kind, though perfectly simple, giving at the same time abundant opportunity for any proficient to exhibit his skill. Considerable thought was given to the form of examination paper, in order to induce the candidates to exercise themselves in sound and accurate work. I am now glad to be able to say there is a decided improvement in the general preparation of the candidates for admission to Woolwich, and I attribute this to the Council's adhering to

the form of paper adopted. I may add as another reason for believing that the form of paper is a good one, that those candidates who have passed a good admission examination have, as a rule, kept their ground during their course in the Academy both amongst themselves and with others whose powers were not previously tested.

In the Royal Military Academy considerable fluctuations have taken place, due to various causes. The greatest stumbling-block in the way of the cadets is the temptation to produce showy drawings of no real merit; all such work blunts the feelings both for nature and true art, at the same time that it gives neither knowledge nor power. The cadets being far above the ordinary average of young men as regards intellect, are especially fitted for training in the mental part of the subject, and they ought to acquire as much knowledge of the principles of art as is possible during their short course in the Academy. If they would thus lay a sound foundation the mechanical skill would be acquired by dint of practice; but if, on the contrary, a false dexterity is made a merit of, there is but small prospect of a student so corrupted ever submitting to the discipline needed for elementary knowledge in this and every other subject. I fear the worst enemies the cadets have to contend against are their own families, who wish to possess something like pictures rather than the hard honest studies of a tyro. If a student has been progressing his work will necessarily be unequal and disjointed, and therefore, excepting in very small drawings, nothing like a picture can be fairly looked for. Of late the chief instruction given in the Academy has been based on drawing from the solid; and as a proof of the advantage of the system the examination of the third class in December last may be instanced, it being the first entirely under this new system. That examination consisted in requiring a tolerably simple object to be delineated by each cadet as completely as he could represent it. Under the old plan of teaching from copies a large portion of the third class used to fall below mediocrity in such an examination, and a very small number did their work satisfactorily; in December last, however, scarcely one failed to give an intelligible representation of the object, whilst a large proportion produced very satisfactory drawings, and commonly in advance of their previous work.

The time given to the study is so short that it is out of the question to look for a high degree of excellence excepting in those cadets who have undergone a good course of elementary instruction before admission. The chief point, therefore, to which I wish to draw attention is the importance of sound elementary instruction being given to *all* the candidates for admission, whether they take up the subject as one for obtaining marks at the examination or not.

At the Royal Military College, Sandhurst, the time given to the study of drawing is so very short that I confess to being generally surprised at finding so much good work resulting from any such brief course of instruction. It is necessary to aim at only very elementary work, but by keeping that aim steadily in view, a large number of the cadets leave with the means of becoming good draughtsmen if they choose to persevere in the exercise of their knowledge.

One of the masters is at present trying the Kensington system with his class. I am very glad to see the experiment tried, though I should never have proposed it, because the time necessary for acquiring the manual dexterity for laying a flat or graduated tint with a point (an early step in that system) leaves little or no time for things of greater importance. It is quite a different affair when time is abundant, but in the military schools no more can be done than giving a sound elementary instruction, teaching the cadets how and what to observe, and enabling them to advance by their own efforts afterwards. The education of an artist must necessarily proceed on a different practice. Nevertheless the overcoming any one difficulty thoroughly and the acquiring a single new power must give a good insight into what is required in even the simplest branch of art.

For military purposes accurate, rapid, pen-and-ink sketches are of all drawings the most valuable; but it is a great mistake to encourage coarse and ignorant work under the name of "bold drawing" as the means to such an end. Accuracy must be secured at all risks; and although the drudgery needed to secure this precision may disgust some cadets with the subject,

still in the end I feel assured the army will gain through a sound course of elementary education being insisted on; for the loss of a few dull or impatient pupils will be amply compensated by the better instruction of those who have a natural bent for art or the strong desire to overcome its difficulties. All complete education is self-education; all that masters can do is to give help in early difficulties and put their pupils on the right track. What is really wanted in the Military Colleges is such a course of instruction as will enable the majority of the officers in the army to make faithful and intelligible drawings of whatever concerns their profession, not one to educate them for artists. Where great natural genius exists it will soon leave all systems of teaching behind.

I do not look for any very great improvement in the drawing at the Military Colleges until the subject is more generally and better taught throughout the country, and especially in the Public Schools.

Lieut.-Colonel Scott, R.E.

Geometrical Drawing.

Since the date of my last report there has been a great change made in the extent of the knowledge of Geometrical Drawing required of candidates for the Royal Military Academy, and this has necessarily had an effect on the nature of the questions set for the admissions to Sandhurst and for direct commissions. Formerly the term Geometrical Drawing was held to include Descriptive Geometry, and the capacity of the candidate for the solution of comparatively difficult problems as well as his skill in Mechanical Drawing was tested. Since, however, the Council decided to confine the questions for the Royal Military Academy examination to the solution of Euclid's problems, and to remove Geometrical Drawing from the list of subjects on which to count marks, the examination, so far as the best and successful candidates are concerned, has been reduced to a test of skill in drawing only.

It is obvious that where candidates are striving to their utmost to obtain the superiority over their competitors, the tendency must be to pay no more attention to subjects in which qualification only is required, and which do not further count in the competition, than appears to them necessary to secure them against disqualification. On the other hand, by bringing the instruction required within the powers of the average drawing masters of schools, it is reasonable to expect that a certain amount of skill in the use of mathematical instruments will be more widely diffused than when instructors specially qualified in Descriptive Geometry had to be sought for. Accordingly, although the best draughtsmen at the examinations at present are not equal to the best under the old system, the number who obtain mediocrity has largely increased. I think also it may be assumed, although there is of course no mode of testing this at these examinations at present, that very few, if any, of the candidates are now instructed in Descriptive Geometry.

The questions for the examinations for admission to Sandhurst and for direct commissions have not been formally limited to the solution of Euclid's problems, but it has been judged expedient to approximate, in these cases, to the same system of examination. In these examinations the solution of such problems proves something more than a test of skill in drawing only, and marks for the subject are counted in the total. The result has been here, also, an increase in the number of candidates who can use mathematical instruments and solve simple problems with them.

In Free-hand Drawing, which in the examinations for Sandhurst and for direct commissions, is combined with Geometrical Drawing, a very low standard still prevails, and I see no evidence of any improvement. One-half at least of the drawings produced might be taken for the productions of children under eight years old.

Monsieur Esquiros.

French.

I think the candidates come up to the Military Examinations better prepared than formerly.

One of my predecessors, M. Delille, reported in 1856 that "*not one* single "composition was written in French without being full of the grossest blun- "ders." Such is not the case at the present time, neither would it now be true to say that the "examinations in French only afford an opportunity of ascer- "taining the sad deficiencies which prevail in this important part of a "gentleman's education."

So far as my experience goes, the candidates in the first examinations I undertook displayed but very little knowledge.

Writing from dictation, when first introduced at Chelsea Hospital, was an exercise unknown and unheard of in most English schools. Superficial training, if not absolute ignorance, betrayed itself at each step by the most ridiculous answers to questions in Grammar.

My impression is that a slow but decided improvement, attended, it is true, with slight fluctuations and limited by various causes, has been constantly going on for some years.

It is to be remembered that three branches formerly connected with the examination in French, Literature, History, and Geography, have been cut off by the Council, and many candidates who escaped absolute failure increased their amount of marks through vague notions of those subjects. Now they are obliged to derive entirely their reward from a substantial knowledge of the language, and therefore the standard of marks gained by them may be slightly affected, though in one sense, at least, their proficiency is more sound and efficient.

I do not doubt for a moment that these examinations have had an effect upon the general school education of the country. As long as private or public tuition was uncontrolled in England, the French masters took it easily, and I should not be surprised that some of them bitterly regret that golden age. Now the results of their teaching are tested from time to time by the amount of marks allotted to their pupils in the examinations, and some responsibility rests therefore upon them.

As early as 1856, the Rev. Canon Moseley said in one of his first reports, "Such examinations are no longer to be understood simply as accepting for "their basis the general education of the country. They are necessarily, to "a certain extent, shaping and directing it." This expectation has been partly realized so far as the instruction in French is concerned. The range of questions and the scope of knowledge insisted on by the Council have checked idle reading, and introduced some method in the real teaching of the language. Much, I own, remains to be done; but good as a system may be, it cannot work wonders in so short a time.

The great hindrance to further progress is, I think, a desire to go quicker than nature and reason admit of. Candidates are taught to translate and even to write in French before they are sufficiently grounded in Grammar. Were instructors to concentrate at first their efforts within the limits of elementary principles and some easy readings, they would promote the future success of their pupils much more surely and efficaciously than by hasty and predatory rambles through the whole of the language.

MONSIEUR SAVOYE.

French.

I have no doubt that the system of army education which has now been in existence for several years, has, as far as the French language is concerned, produced good results, and exercised a very marked and salutary influence on the school education of the whole country. To be convinced of the truth of this assertion, in which, as I understand, most heads of schools and preparatory institutions readily concur, it will be sufficient to compare the standard of studies and preparation of former years with that of the present day.

Going into details, it will be right, however, at the very outset, to draw a distinction between candidates for admission to the Royal Military Academy, Woolwich, and those for direct commissions, or for admission to the Royal Military College, Sandhurst.

The improvement in the preparatory studies and general proficiency of the candidates for Woolwich is a real one, both with regard to the method of

learning and teaching, and to the importance of the studies themselves and the practical direction of the same.

About the examinations for direct commissions and those for admission to the Royal Military College, Sandhurst, my opinion is less confident, less favourable.

In these examinations the examiner has generally to deal with extremes, good or bad. There always exists in both cases (direct commissions and admission to Sandhurst) a certain number, forming but a small minority, of candidates producing very fair, nay, sometimes very distinguished papers; these have either resided for a long time in France, or been placed under some other particularly favourable circumstances for their French education. Their proficiency is the more conspicuous as the average of their fellow candidates, indeed the great majority of them, come forward in too many cases, if not without any preparation at all worthy of that name, at least very deficiently prepared.

Still I am happy to state, that latterly, and more especially in the recent examination for admission to Sandhurst (December 1868), a respectable number of fair papers has been produced, and this leads me to expect that the relative inferiority of these two last-mentioned classes of candidates, due, may be, to temporary and exceptional circumstances, will gradually disappear in proportion as it becomes distinctly known that a more thorough preparation is the only and indispensable road to success.

To sum up, and carefully bearing in mind the state of matters at the time of the introduction of the system of army examinations, it is, in my opinion, a positive and undeniable fact that candidates come up now far better trained and grounded than formerly, and that although there still exists a wide, and indeed a very wide, margin for further improvement, this progress has, barring a few fluctuations, been steadily and uninterruptedly going on. I have every reason for believing in its continuation and permanent development.

Rev. C. SCHÖLL.

German.

In taking a retrospect of the last ten years, I deem it convenient to take separately the examinations for admission to the Royal Military Academy at Woolwich, and those for Sandhurst, and for direct commissions, and again those of the commission classes at Woolwich and Sandhurst.

In regard to the *Woolwich examinations*, I have in my former report pointed out the very decided improvement indicated by a comparison of the earliest examinations with the later ones. Since then the general standard of qualification has remained much the same.

With respect to the examinations for *admission to the Royal Military College* and those for *direct commissions*, which may be grouped together, I am sorry to say that they exhibit neither the same steady progress nor the same state of proficiency as the Woolwich examinations.

A very considerable improvement has taken place since 1863 in the examinations for obtaining *commissions from the Royal Military Academy*. Whilst in 1860 the failures amounted to 61 per cent., and in 1863 still to 30 per cent., they were in 1864 reduced to 3, and have since remained as low as 2·5 on the average. These examinations as well as those for admission to Woolwich are invariably far superior to the other examinations.

A progress is likewise perceptible in the examinations for *commissions from the Royal Military College*. At the last two or three examinations which I held, the questions were not any longer taken from the text books of the college. Still the result was not unsatisfactory.

The soundness of knowledge, I think, is best tested by comparing the answers to the grammatical questions with the composition. If the candidate is well grounded, he will show the same amount of knowledge in the latter as in the former. Applying this test to the several examinations, I find that in the majority of cases where the grammar paper is done very well, the composition is full of faults. This fact clearly proves that the elementary education is defective, that students learn the grammatical forms and rules by heart, but are either not taught how to apply them, or are unwilling to take the trouble to apply them carefully. I do not say that the average knowledge in Grammar

is as low as ten years ago; on the contrary, I can trace a gradual and marked improvement in it from first to last, but I am decidedly of opinion that unless the great drawback just mentioned is removed, not only the success at the examinations will continue to be considerably impaired, but also the subsequent study of the language greatly impeded.

The army and other public examinations have hitherto had a salutary effect on the general school education of the country as well as on private tuition. The teachers know by this time right well what is required of their pupils at the several examinations.

Professor MAX MÜLLER.

German.

There has not been of late years any perceptible change either for the better or for the worse in the average acquirements of the candidates for the Army Examinations. A very marked improvement took place during the first years in which the system of examination was at work, but the instructions given to the examiners not to increase the difficulty of the examinations seem to have checked further progress. I believe such progress might have been obtained without any injury to the candidates, and with real advantage to the service for which they are intended.

If more difficult questions had been set, the examiners would, of course, have made full allowance for their difficulty in apportioning the marks to each answer, nor would they have experienced any embarrassment in selecting the best candidates. But, at the same time, if teachers had seen what was, if not expected, at least desired by the examiners, they would probably have made greater exertions in preparing their pupils, and the best candidates, at all events, would have reached a higher degree of excellence than they do now. The outcry against difficult questions comes generally from people who have no practical experience in examining. Examiners know how to weigh a less perfect answer to a difficult question, against a more perfect answer to an easy question. And unless some difficult questions are given, the best candidates complain, and complain justly, that they had no opportunity given them of putting forth their whole strength.

More than half of the candidates who now offer themselves to be examined in German, are unable to translate an easy passage from German into English without mistakes, and their knowledge even of the elements of grammar is very uncertain. As some of them pass on the strength of their acquirements in other subjects, it becomes necessary to begin the instruction in German at Sandhurst and Woolwich with the A. B. C. Hence those who know anything of German before they enter the College do not seem to improve their knowledge, and very little progress is made by others who, beginning with the elements, have only a few hours every week to devote to the study of th German language.*

Professor LIVEING.

Experimental Sciences.

I have no doubt that candidates come up to the Army Examinations now generally better prepared than formerly, and that there has been on the whole a progressive improvement as regards experimental science.

The answers are more to the point and fewer random guesses are sent up. In fact the teaching appears to be better, so that I have considered myself entitled to expect a somewhat higher standard of attainment than in the earlier examinations. The progress has been less during the last two years than previously, but this may be accounted for by the fact that it is really more difficult to get beyond the present stage than it was to come up to it.

I believe the Army Examinations have done much to promote the study of

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* *Note by the Council of Military Education.*—This opinion requires to be qualified by the observation, that at Sandhurst the cadets who are examined in German at the end of the course, have not necessarily been under instruction in that language during the whole period of their residence. Some may have been one or more terms under instruction ,but some may not have attended the German class at all.

experimental science at schools; they have increased the demand on the part of parents for instruction in such subjects. The teaching of science in schools is not yet fully organized except in a few cases, and I expect to see still better results in the Army Examinations when the teaching shall be so complete that candidates for the Royal Military Academy, Woolwich, may present themselves directly from school for examination in Experimental Sciences.

At present the published lists show that a large proportion of the successful candidates for the Royal Military Academy have had special training from private tutors, and the influence of such special preparation is often perceptible in the general character of the answers; the minds of the candidates seem to have been directed to the examination rather than to the subject itself. One way in which this shows itself is in an endeavour to find a hidden meaning in the questions as if they were framed with a view to catch the candidates tripping: whereas I never intentionally set questions of such a character. In the examinations for admission to the Royal Military College, Sandhurst, the answers are usually given in a straightforward way, and show little of any special preparation.

I cannot help regarding the system of special preparation as an evil, and I endeavour, as far as the nature of the case will permit, to let it have as little advantage in the examinations as possible. Nevertheless it is not an unmixed evil; candidates at least learn by it close application and some degree of readiness, and so far as Experimental Science goes I do not think the knowledge exhibited of little value, either as an indication of intelligence or as information, and I feel confirmed in my view by observing that in by far the greater number of cases candidates for admission to the Royal Military Academy who are most successful in Experimental Science are also above the average in Mathematical attainments.

As regards the examinations for direct commissions I have had no opportunity of ascertaining how many of the candidates have had special preparation. The results of these examinations vary a good deal; and in many cases I attribute failure in Experimental Science quite as much to imperfect early education as to any want of teaching in Experimental Science. Those who have never been taught to express themselves in tolerable language have no facility in acquiring or reproducing anything which needs precision of thought. It may, perhaps, not unreasonably be held that a private tutor is the best help that such cases admit of.

Professor ABEL.

Experimental Sciences.

While referring to and endorsing the statements I have made on former occasions regarding the important improvement, since first Military Examinations were instituted, in the extent and soundness of knowledge exhibited by candidates in the subjects dealt with by me, and in the character of the preparatory training in Experimental Sciences pursued at educational establishments, I have to point out that the results of recent examinations have only exhibited those fluctuations which are to be expected when a particular standard of preparation has become permanently established. This must, however, by no means be accepted as an indication that the methods of Science-teaching now pursued, in connexion with preparatory Military Education, are fully satisfactory in their results; on the contrary, it has been my duty to point out that there is room for considerable improvement in this direction.

If the students were more generally and thoroughly grounded in the important principles of Experimental Sciences, by being exercised to a much greater extent than at present in the practical application of those principles, instead of simply committing them to memory, as is still too frequently the case, the time devoted to these subjects could not fail to be attended by much more permanently profitable results to those under instruction.

H. W. BRISTOW, Esq., F.R.S.

Natural Sciences.

On the whole the candidates come up better prepared than formerly, and as a rule their answers show a fair and, in many cases, a careful study of the subjects of examination. The knowledge of the "candidates for

admission" and for direct commissions, as regards Geology, is sometimes (if the expression may be allowed) old-fashioned, but this may perhaps be owing to old books having been read on the subject instead of more modern works. It struck me very forcibly on first entering upon my duties that the prevailing defects of candidates were carelessness and a want of proper attention; and that if they had taken more trouble to master the bearings of the questions before they began to answer them, and had revised their answers when written, they would have kept closer to the subject and have done more justice to themselves.

Both the above-mentioned faults are less apparent now.

I am convinced that the Army Examinations have a marked effect upon the general school-education of the country; because where boys are being educated who are likely to go into the army, and who will have to undergo examinations pitched at a high standard, the whole course of instruction of the school must be raised to meet the requirements of such cases, and in this way scholastic training generally will eventually improve, in a corresponding degree, throughout the country.

An acquaintance with the science of Geology ought to be of particular importance to a military man, not only on account of the special applications, such as finding water, &c., which he may often be able to make of it to the great advantage of the service, but from the way in which it will quicken his power of observation generally, and enable him to take in at a glance capabilities of ground and the general features of a country, which would not be so readily perceived, and might indeed remain altogether unnoticed, by a less educated and practised eye.

A conviction of the importance of scientific knowledge (or, in other words, of a knowledge of common things and the laws of nature in contradistinction to a mere knowledge of words and dead languages) as a part of general education, is daily gaining ground throughout the community at large, and such knowledge is now fast being extended to the middle classes.

Professor Morris.

Natural Sciences.

Having conducted the examination for a comparatively brief period, I am scarcely prepared to give a very decided answer on the points to which my attention is drawn, but I feel justified in expressing the opinion that during that period an improvement has been manifested by the candidates.

It is true that some candidates do present themselves with only a superficial knowledge of the subjects, apparently hurriedly obtained; but still I have noticed with much pleasure that many candidates have acquired a sound and comprehensive knowledge, evincing diligent study and more efficient instruction.

I have good reason for believing that in several of our public schools, amongst others I may mention Rugby, also Marlborough and Cheltenham Colleges, considerable attention is now being paid to, and more effective instruction given in the Natural Sciences than formerly, in consequence of these subjects being required in military and other examinations, as embodying a knowledge of a useful, elevatory, and practical nature.

There is no doubt that the examination in Natural Science has not only had an influence upon, but has materially enlarged the sphere of education in this country.

Although instruction in these subjects has been more or less generally introduced in our schools during the last few years, yet the recognized requirement in this department of knowledge of candidates for military and civil appointments has had not only a *direct* influence upon general education, from the prospective advantage of the knowledge of the Natural Sciences, but also *indirectly* from the necessity of becoming acquainted to some extent with the collateral branches of science which bear upon them.

It is evident from the unanimous testimony of the examiners, that a very considerable advance has been made since the Army Examinations were first established; and if the rate of progress observed prior to 1865 has not been sustained during the last four years, it is because the highest standard attainable under the present system of education in the public and private schools of the country was probably reached, or very nearly so, at that time.

The Council are glad to acknowledge that at some of the great public schools, and especially at Rugby, Marlborough, and Cheltenham, efforts have already been made to remedy this unsatisfactory state of things, and opportunities are now afforded for instruction in almost all the subjects from which candidates are allowed to choose at the Military Examinations. The movement in this direction must, however, become far more general before its good effects can be seen in the mass of candidates for the Army.

The examination for admission to the Royal Military Academy is of such a special nature, and the competition is so keen, that candidates will probably continue to find the assistance of private tutors necessary, but the Council see no reason why the schools should not be able to send up the candidates for Direct Commissions, and for admission to the Royal Military College, fully prepared to pass these examinations, which were carefully framed with this view, and they believe that, were this accomplished, the Army would benefit greatly by the higher tone which would then be imparted to young officers by the more healthy discipline of large schools.*

XIV.

INSTRUCTION OF OFFICERS IN PROFESSIONAL SUBJECTS AFTER THEY HAVE RECEIVED THEIR COMMISSIONS.

In their First General Report, the Council entered at considerable length into the question of providing young officers with the means of acquiring knowledge of professional subjects after joining their regiments, observing that the value of such instruction can hardly be over estimated, and that it would be the means of inducing and enabling many to pursue the study of Military Science during their subsequent service.

To effect this object, a detailed scheme had been drawn up by the Council immediately after their first appointment in 1857, but various circumstances combined to render its execution impracticable.

Without adopting all the features of that scheme, the Council are still of opinion that much might be effected for the young officer at that period of his military career when he is most capable of acquiring information, and when it is most important that his mind should be provided with wholesome occupation.

It is true that officers are now required, as recommended by the Council in 1857, to pass a certain examination in Military Science for

* Since the above was written, the Council have been informed that, with a view to obviating the supposed necessity for removing boys to a private tutor's precisely at an age when the influences of public school life are most powerful and most salutary, it is proposed shortly to establish a "modern side" at Harrow, for the benefit of those boys for whom an advanced classical training seems undesirable; and that in this department the principal subjects of instruction will be Mathematics, French, German, History, English Literature and Physical Science.

In a communication subsequently received from the Head Master of Eton, the Council learn that an "Army Class," designed to help backward boys who wish to prepare for the ordinary Army Examinations, has been for some time in operation at Eton, and that it has been very successful.

promotion of the rank of Captain, but the Council have no precise information as to the manner in which this examination is carried out. They are, however, impressed with the belief that, owing to the great variety of officers composing the Examining Boards at different stations, great diversity exists in the system, and that some officers are, or may be, subjected to a much more severe test than others.

In the examination for a troop or company some knowledge is required of field fortification and reconnaissance ; but these subjects are entirely new to the great majority of young officers who enter the army by the direct examination, nor do they possess any means of becoming acquainted with them without seeking the aid of a private tutor, unless they happen to be quartered at Aldershot, where some instruction is provided for a limited number of officers by what is termed the survey class. This has now been in operation for several years and as the sketches and surveys made by the students are forwarded periodically for the inspection of the Council they have had frequent opportunities of judging of the results attained ; and they are of opinion that the system is capable of being extended with advantage to the service.

The class at Aldershot is at present under the immediate superintendence of an officer of the Royal Artillery who passed the Final Examination at the Staff College in 1860, and has since served on the General Staff of the army. Only two officers from each regiment at the camp are permitted to attend the class at the same time, and the instruction is usually suspended for two or three months during the leave season. There are two courses of instruction ; the first an elementary one, comprising practical geometry, so far as is necessary for the understanding of the principles of surveying and fortification, plan drawing, the construction and use of scales, and military sketching ; and it is attended on an average by seven or eight officers, who are relieved from all duty during the two months which it occupies.

The second course embraces surveying in its more advanced branches, military reconnaissances and road reports, field fortification, including the attack and defence of small posts, the construction of simple intrenchments, redoubts, and field works, profiling and tracing on the ground, gabion and fascine making, camping and the construction of field ovens and cook houses ; and this course is understood to extend over four months. But owing to the press of duty consequent on the assemblage of a large force, no officer appears to have been able to complete this course.

Accommodation at Aldershot for a larger class (in course I.) appears to be wanting at the survey office, which is in no way fitted up as a class room for drawing or any other purpose, and is destitute of works of reference. It has been suggested that the Prince Consort's Library, which is now scarcely used, might be made available for this purpose with great advantage to such officers of the division as are desirous of improving themselves in professional subjects.

In a private communication the officer superintending the class has recently remarked : " It is believed by many people that officers attend " the survey class merely to escape duty, and without any idea of " improving themselves ; but I can only name two instances in which " I have had reason to suspect that this was the case. Generally " speaking, I have been surprised at the anxiety to learn, and at the " pains taken, when there is no immediate object to be gained."

The Council, therefore, consider themselves justified in saying that the experiment made at Aldershot has been successful in an appreciable degree ; and with a view to provide young officers with the means of preparing themselves to pass the required examination for promotion,

the Council are of opinion that the system upon which they have been commenting should be extended so as to embrace Military History, Administration, and Legislation, and that such facilities as local circumstances will admit of should be given to the officers who wish to attend the lectures on these subjects, as well as to those who are desirous of going through the present second or higher course of Surveying and Fortification. The Council would recommend that the proposed instruction should be extended to certain large stations besides Aldershot, namely, Portsmouth, Dublin, Gibraltar, and Malta, and that officers who have passed through the Staff College be selected to lecture upon the additional subjects they have named.

Independently of the advantages to be derived by young officers from the system here advocated, the Council consider that it is very desirable to employ those officers who have passed through the Staff College, and are waiting for appointment to the staff of the Army, in imparting instruction to others. Such employment would tend more than any other to keep up the knowledge gained at the Staff College, and to render that knowledge available for the public service whenever those officers found themselves placed in positions of responsibility on the General Staff.

(Signed) WM. NAPIER, Major-General,
Vice-President.
H. D. HARNESS, Colonel.
HENRY MOSELEY.
E. H. F. POCKLINGTON,
Colonel.
E. B. HAMLEY, Colonel.

13, Great George Street,
31st March 1869.

APPENDIX.

App. I.
Professors and Masters.

Appendix I.

List of Professors and Masters who have been appointed to the several Military Colleges since the date of the Council's last Report.

When appointed.	Professor, Master, &c.	Name.	College.	Remarks.
Jan. 1865 -	Master in French - -	M. Valentin - -	R. M. College.	—
Feb. 1866 -	Master in French -	M. Valentin - -	R. M. Academy	From R. M. College.
16th April 1866	Master in French - -	M. Balagué - -	R. M. College.	—
1st Aug. 1866 -	Instructor in Military Drawing and Surveying.	Captain T. H. Pitt, R.A.	„	—
8th Feb. 1867 -	Master of Mathematics -	Mr. J. P. Ketley - -	„	—
15th Feb. 1867	Professor of Fortification.	Captain J. J. Wilson, R.E.	R. M. Academy.	—
12th Mar. „	Instructor of Fortification.	Captain C. N. Martin, R.E.	„	—
14th Mar. „	Instructor in Surveying and Topographical Drawing.	Captain F. E. Pratt, R.E.	„	—
22d Mar. „	Instructor in Fortification.	Captain E. L. Bland, R.E.	„	—
1st July „	Professor of Surveying and Topographical Drawing.	Brevet-Major A. W. Drayson, R.A.	„	—
10th Aug. „	Instructor in Surveying and Topographical Drawing.	Lieut. W. H. Collins, R.E.	„	—
2d Sept. „	Instructor in Fortification.	2d Capt. H. F. C. Lewin, R.E.	„	—
7th Nov. „	Instructor in Military History.	Lieut. H. G. MacGregor, 17th Foot.	R. M. College.	—
27th Jan. 1868	Master in French - -	Mons. L. J. C. Bouracier	„	—
1st April „	Professor of French -	Mons. A. Talandier -	Staff College -	From R. M. College.
„ „	Master in French - -	Mons. E. Clavequin -	R. M. College.	—
29th May „	Professor of Military History.	Captain H. Brackenbury, R.A.	R. M. Academy.	From Instructor in Artillery.
„ „	Professor of Military History.	Captain E. M. Jones, 20th Foot.	R. M. College.	—
„ „	Professor of Military History.	Major C. Adams (late King's Own Lt. Infy. Mil.)	Staff College -	From R. M. College.
1st Aug. „	Instructor in Military Drawing and Surveying.	2d Capt. C. W. Fothergill (Royal Marine Artillery.)	R. M. College.	—
Sept. „	Instructor in Military History.	Lieut. C. W. Robinson, (Rifle Brigade.)	„	—

Appendix II.

List of Officers who have passed their Examination for Direct Staff Appointments since the Date of the last Report.

Rank.	Name.	Corps.	Date of Examination.	Nature of Appointment.
Captain	Nicholson	Royal Artillery	March 1865	A.D.C.
Ensign	Walpole	Rifle Brigade	„ „	„
Lieutenant	Baring	Royal Artillery	April „	„
„	Strahan	„	„ „	„
Captain	Croome	96th Foot	May „	„
Lieutenant	Curzon	Royal Artillery	June „	„
Captain	Glynn	Rifle Brigade	July „	„
Major	Mackenzie	Royal Artillery	„ „	„
Lieutenant	Williamson	2/ 23d Foot	Sept. „	„
Ensign	Lanyon	1/ 6th „	„ „	„
Lieutenant	Monsell	73d „	Oct. „	„
„	Harris	86th „	Jan. 1866	„
„	Bailie	52d „	Feb. „	„
„	Curteis	1/ 16th „	March „	„
Captain	Graham	Scots Fusileer Guards	„ „	„
„	Parnell	2/ 3d Foot	April „	„
„	Chichester	81st „	„ „	„
Lieutenant	Shafto	Royal Artillery	„ „	„
Captain	Coventry	1/ 15th Foot	May „	„
„	Markham	Rifle Brigade	„ „	„
„	Walker	Scots Fusileer Guards	July „	„
„	Malan	75th Foot	Dec. „	„
Lieutenant	Clayton	Royal Artillery	Jan. 1867	„
Captain	Herries	65th Foot	Feb. „	„
Lieutenant	Grant	78th Highlanders	May „	„
Ensign	Mitchell	17th Foot	Nov. „	„
Captain	Hay	92d Highlanders	„ „	„
„	Hon. F. A. Wellesley	Coldstream Guards	„ „	„
„	Boileau	61st Foot	Jan. 1868	Assistant Military Secretary.
Lieutenant	Brownrigg	Rifle Brigade	Feb. „	A.D.C.
Captain	Stephenson	Scots Fusileer Guards	April „	Brigade-Major
Lieutenant	Hare	22d Foot	May „	A.D.C.
Captain	H. De G. Seymor	Grenadier Guards	June „	„
„	Coventry	15th Foot	July „	Assistant Military Secretary.
„	Cole	2/ 7th Foot	„ „	A.D.C.
Lieutenant	Lord Rosehill	Scots Fusileer Guards	Sept. „	„

Appendix III.

General Orders by his Royal Highness the Field Marshal Commanding-in-Chief. 1st November 1868.

G.O. 102.—Staff College.

I. The accompanying revised Regulations for the Staff College, Appendix (page 3), are promulgated for the information and guidance of officers of the army.

II. All applications to study at the Staff College must be made whilst the officer making it is present and serving with his regiment, through the commanding officer. No application from an officer on leave will be entertained.

III. Although only one officer can be spared from a battalion at a time, for the purpose of studying at the College, this will not necessarily prevent a battalion sending more than one to compete at an examination, if circumstances admit of their absence from their regiment.

IV. The principle under which officers are allowed to enter the Staff College being that of pure competition, it follows that candidates who may be found qualified at any examination, but who, from want of a sufficient number of vacancies, cannot then be admitted, will not have any claim to subsequent admission, without undergoing another competitive examination.

V. Officers who have passed their final examination at the Staff College will be attached to other arms of the service for the purpose of acquiring instruction

App. III. Staff College.

in those duties and field movements which are not common to their own. Certificates of their efficiency therein will be forwarded to the Adjutant-General by the officers commanding the corps to which they have been attached.

Officers of cavalry and infantry will attend at Woolwich, or such other station as may be ordered, for instruction in artillery, for a period of six weeks.

Officers of cavalry will be attached to infantry for one month.

Officers of artillery, horse artillery excepted, will be attached to cavalry for one month, and officers of infantry for six weeks.

Officers of artillery will not be required to be attached to infantry.

VI. The regulations relative to the qualifications of officers for direct staff appointments will continue in force until the system which has been above detailed shall have fully come into operation, and the examinations referred to in those regulations will be conducted under the direction of the Council of Military Education.

VII. Substantive field officers, however, who have attained the rank of Lieutenant-Colonel will be exempted from the operation of that order.

VIII. As soon as the College shall be in a position to supply all vacancies in the staff of the army, no officer will be appointed to the staff who shall not have passed the final examination of the College, with the exception of those of the Royal Engineers, and of those substantive field officers who attained before the 1st January, 1860, the rank of Lieutenant-Colonel; and in every case excepting officers of proved ability in the field.

IX. Candidates who shall have proved their fitness for employment on the Ordnance Survey, or in the Topographical department, by superior progress in the higher course of mathematics, as well as in topography, will be named in the report of the Council of Military Education as deserving of employment in those services.

W. Paulet, A. G.

Appendix to General Order 102.

The following Regulations for the admission of officers to the Staff College are substituted for those of the memorandum of the 1st May 1866, published with the General Order No. 886.

1. The Staff College is open to officers of all arms of the service, except Royal Engineers who are eligible for staff appointments without passing through the College, and consists, at present, of 30 students; admission to the College being determined by a competitive examination. Only one officer at a time can belong to the College from a battalion of infantry, or a regiment of cavalry, and only four officers at a time from the corps of Royal Artillery; but so far as the exigencies of the service shall permit there will be no limitation to the numbers allowed to compete for admission.

2. Fifteen vacancies will be offered for competition annually, two of which may be filled by officers of the Royal Artillery, provided they are among the fifteen candidates highest on the list.

3. No payment is required from students to the funds of the College, beyond an entrance fee of 3*l.* from an unmarried and 1*l.* 10*s.* from a married officer as a contribution to the College mess funds in addition to the regulated quarterly subscription; and an entrance subscription of three guineas to the College Library.

4. The qualifications requisite for admission, are—

1st. A service of not less than five years, previous to examination, exclusive of leave of absence.*

2d. A certificate from his commanding officer, as follows :—

"I hereby certify that I have examined _____
" on the various subjects connected with his duty as a regimental officer, and
" more especially on the points which form the chief qualifications of a staff
" officer, with a view to his competency for admission to the Staff College,

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* This is not to apply to the usual leave of absence annually granted to officers.

" Sandhurst; and to the best of my belief and judgment I consider him, from
" his general knowledge of the service, character, habits, and disposition, to be
" qualified in those respects for employment on the staff.
" He is a (good, fair, or indifferent) rider, and is not short-sighted."

Signature of commanding officer of regiment. } _____

Countersigned by the general of brigade, or other superior officer. } _____

3d. The candidate, if not a captain, to have passed the examination for a troop or company.

4th. A medical certificate of good health, and fitness for the active duties of the staff.

5. Commanding officers of regiments will, in every case, forward applications for admission to the Staff College through the general officer in command to the Adjutant-General. If the commanding officer of the regiment, or the general officer commanding, cannot recommend the application of any candidate the grounds of objection are to be distinctly stated.

6. The competitive examination for entrance to the Staff College comprises the following subjects, the relative value of each at the examination being shown by the number of marks attached to it:—

	Marks.
Mathematics	1,200
Military History 600 Military Geography 300	900
French	300
German	300
Hindustani	300
Fortification	600
Military Drawing	300
Mineralogy and Geology	300
Chemistry, Heat, Electricity, and Magnetism	300

In Mathematics, 400 marks are allotted to Arithmetic, the first four books of Euclid, and Algebra, including questions producing simple equations; and of this number at least 250 must be obtained for qualification.

7. Every candidate must take up either the French, German, or Hindustani language for qualification; the qualifying minimum is in French 150 marks, in German or Hindustani 100 marks.

8. The remaining subjects, as well as the higher portions of Mathematics, may be taken up or not at the option of the candidate, the marks gained therein being reckoned in determining his position in the list of competitors. No candidate, however, will be allowed to count marks in any subject left optional unless he obtains at least one-sixth of the number allotted to it.

9. In regard to Military History, early notice will on each occasion be given of the special campaigns on which questions will be set at the next ensuing examination.

10. The examination of officers serving in the United Kingdom, for entrance to the Staff College, is held in London, about the month of July, under the direction of the Council of Military Education.

11. In the case of officers serving abroad, the examinations of such as are allowed to compete are conducted by means of the same printed questions as are set for the examination of candidates in London. These questions are to be answered in writing in the presence of a board of officers, which will be appointed by the general officer in command, and which will certify that the candidate has obtained no assistance from books, or help of any kind in the examination.

12. Notice will be given of each examination, and detailed instructions for the guidance of candidates will be published annually in the general orders of the army. Candidates are recommended to obtain the reports of the past examinations for admission, with copies of the examination papers, published by Taylor and Francis, Red Lion Court, Fleet Street.

13. The College course of study commences annually on or about the 1st of

February. The transmission of the printed examination papers to stations abroad is so arranged that the examinations may be held simultaneously, and the merits of the candidates decided upon in time to admit of those who are successful joining the Staff College by the 1st February next ensuing.

14. A synopsis of the course of study will be forwarded to any officer on application to the Council of Military Education, 13, Great George Street, S.W.

15. The following are the subjects of instruction at the Staff College, viz:—

Mathematics.

French, German, and Hindustani.

Fortification and Artillery.

Topographical Drawing, Military Surveying, and Sketching.

Reconnaissance.

Military Art, Military History, and Geography.

Military Administration, including the organization and equipment of armies in the field.

Military Legislation.

Elements of Natural Philosophy, Chemistry, and Geology, as applied to the Military Sciences.

Exercises in Composition will be afforded to the students during the whole course of instruction, in writing memoirs or essays on the subjects of the course.

Riding.

16. The course of study occupies two years, which period is not to be exceeded except in case of illness, and then only with the sanction of the Field Marshal Commanding-in-Chief.

17. The yearly course is divided into two terms, viz., from the 1st February to 15th June, and from the 15th July to the 15th December, the intervening periods constituting the vacations.

18. During the whole course monthly reports of the application and progress of each student will be forwarded for the information of the Council of Military Education. Examinations are held at the end of every half-year; the Summer Examination being conducted by the Professors of the College, and the Winter Examination by examiners independent of the establishment, under the superintendence of the Council of Military Education.*

19. The Winter Examination at the termination of the first year of the student's course is probationary, and any student will be required to withdraw from the College who shall fail to obtain the minimum aggregate of marks herein-after stated.

20. Should, however, any marked case of deficiency or neglect be brought under the notice of the Council of Military Education at any half-yearly examination, or at any other period, such student also will be liable to removal.

21. The following five subjects will be taken up by every student at the Probationary Examination, viz.:—

	Maximun of marks.	Minimum of Marks allowed count.
I. Fortification	280	90
II. Military Drawing and Surveying	270	90
III. Military History	300	100
IV. Military Administration and Legislation	300	100
V. French, German, or Hindustani	400	133

Every candidate will be expected to obtain 800 marks on the above subjects.

22. All credits gained on the four military subjects will be carried forward to the Final Examination.

* In Military History, periodical examinations are conducted by the College Professor and the Public Examiner in concert.

23. Of the following subjects the student may select any two, and in those numbered from 1 to 6, as well as in the language already selected as "Obligatory," the student may at his option carry forward to the Final Examination the marks he gains, provided they amount in each case to three-fourths the allotted maximum, when he will be considered as finally examined in that subject :—

1. Mathematics, lower course	400
2. Mathematics, higher course	500
3. French	400
4. German	400
5. Hindustani	400
6. Any other Modern Language	400
7. Natural Sciences, lower course	150
8. Experimental ditto, lower course	150

In those numbered 7 and 8 the marks gained will be carried forward to the Final Examination.

24. In addition to any two of the above subjects, the following may be taken up at the Probationary Examination; and if 150 marks be gained in it, they may, at the option of the student, be carried forward to the Final Examination :—

Spherical Trigonometry and Practical Astronomy - 200

25. Any officer who does not take up Mathematics as a subject, will be required to satisfy the examiner that he has a competent knowledge of Mensuration; of the mode of determining heights and distances by ground problems, by the ordinary Trigonometrical Calculations with the aid of Logarithms; and of elementary mechanics; as shown in the Synopsis of Studies of 1868. His knowledge of these subjects will be tested at the Probationary Examination at the end of his first year of residence.

26. The following are the marks allotted to each subject at the Final Examination.

Subjects to be taken up by every student :—

	Maximum No. of Marks. *	Minimum allowed to count.
Fortifications and Artillery	600	300
Military Drawing and Surveying	350	350
Reconnoissance	350	
Military Art, History, and Geography	600	300
Military Administration and Legislation	600	300
French, German, or Hindustani	400	200

Every candidate will be required to obtain for qualification an aggregate of 1,800 marks on the above five subjects.

27. Of the following subjects the student may select any two, and the credits gained will count for position in the order of merit.

	Maximum No. of Marks.	Minimum allowed to count.
Mathematics, lower course	400	240
Mathematics, higher course	500	300
French	400	240
German	400	240
Hindustani	400	240
Any other Modern Language	400	240
Natural Sciences	400	240
Experimental do.	400	240

* Including the marks appropriated to the Probationary Examination.

28. In addition to any two of the above-mentioned subjects, the following may be taken up by any student who did not take it up at the first year's examination, or did not then obtain three-fourth marks in it:—

Spherical Trigonometry and Practical Astronomy - 200 ... 120

29. In the Examination in Modern Languages, great stress will be laid on original composition.

30. Officers desirous of showing their proficiency in other of the optional subjects, in addition to those which are allowed to be taken up for the competitive examination, may be examined therein, and a special report of their qualifications will be made to the Field Marshal Commanding-in-Chief, provided they obtain three-fifths of the maximum allotted to the subject; but they will not be allowed to count any marks thus gained in determining their position in the order of merit.

31. After the Final Examination the Council of Military Education will draw up, and submit for the consideration of the Field Marshal Commanding-in-Chief, a list of the successful candidates, arranged according to merit.

Appendix IV.

Examination of Officers, Candidates for admission to the Staff College, July 1865.

Order.	Rank.	Name.	Corps.	Station.	Index Number.	Mathematics. Obligatory.	Mathematics. Voluntary.	French.	German.	Hindustani.	Military History and Geography.	Fortification.	Military Drawing.	Chemistry.	Geology.	Total.	Remarks.
				Maximum -		*400*	*800*	*300*	*300*	*300*	*900*	*600*	*300*	*300*	*300*	..	
				Minimum -		*250*	..	*150*	*50*	*50*	*150*	*100*	*50*	*50*	*50*	..	
1	Lieutenant -	J. W. Hozier - -	2nd Dragoons -	Home -	133	330	420	260	230	..	654	487	100	165	154	2,800	Recommended.
2	„ -	H. T. Butler - -	4th Hussars -	„ -	139	379	455	252	200	..	308	475	210	180	..	2,459	Ditto.
3	„ -	O. W. Braine - -	30th Foot -	Canada -	277	365	540	232	..	..	546	468	65	65	115	2,396	Ditto.
4	„ -	Honble. R. Abercromby -	4/ 60th R. -	„ -	278	377	375	203	..	..	446	491	59	175	126	2,252	Ditto.
5	„ -	Honble. J. Abercromby -	4/ R.B. - -	Home -	62	331	95	216	..	..	629	545	95	165	149	2,225	Ditto.
6	„ -	H. H. Griffiths - -	59th Foot -	„ -	135	384	400	184	..	..	372	540	148	..	104	2,132	Ditto.
7	„ -	W. P. Mortimer - -	80th „ -	„ -	68	381	320	204	..	250	378	260	69	110	92	2,064	Ditto.
8	„ -	W. F. Nelson - -	Royl. Artillery -	Canada -	276	371	235	208	..	..	394	510	102	90	125	2,035	Ditto.
9	„ -	A. L. E. H. Holmes -	7th Hussars -	India -	215	346	295	209	..	269	323	363	89	140	..	2,025	Ditto.
10	„ -	L. de T. Provost - -	47th Foot -	Canada -	279	364	375	205	..	..	366	524	190	..	*41*	2,024	Ditto.
11	Captain -	G. U. Prior - -	100th „ -	Home -	44	366	150	181	..	..	635	432	143	*35*	76	1,983	Ditto.
12	Lieutenant -	R. H. Fawcett - -	33rd „ -	„ -	142	303	40	213	..	265	383	366	122	100	87	1,879	Ditto.
13	Captain -	F. R. Gubbins - -	1/ 2nd „ -	„ -	45	252	150	214	..	..	393	472	195	0	*44*	1,676	Ditto.
14	Lieutenant -	C. Campbell - -	48th „ -	„ -	69	252	15	108	..	215	337	393	94	120	92	1,626	Ditto.
15	„ -	G. E. Boyle - - -	1/ R.B. -	„ -	63	336	35	187	..	..	484	440	115	..	..	1,597	Qualified; but there are no further vacancies.
16	„ -	P. Clark - - -	9th Lancers -	„ -	72	329	70	245	..	..	488	398	59	..	..	1,589	Ditto.
17	Captain -	F. S. Herries - -	65th Foot -	„ -	65	321	175	163	55	..	157	430	94	100	59	1,554	Ditto.
18	Lieutenant -	G. S. Robertson - -	51st „ -	„ -	136	302	145	198	..	..	315	324	130	100	..	1,514	Ditto.
19	Major -	J. Aytoun - - -	Unattached -	„ -	134	252	30	217	..	186	..	515	95	90	75	1,460	Ditto.
20	Lieutenant -	R. T. Goldsworthy -	9th Lancers -	„ -	42	288	100	152	..	260	307	213	105	..	..	1,425	Ditto.
21	„ -	H. M. Moorsom - -	R. H. Artillery -	„ -	59	288	130	205	..	..	422	350	*25*	..	*30*	1,395	Recommended.
22	„ -	G. G. Stewart - -	2/ 1st Foot -	„ -	145	250	75	158	..	..	282	388	115	60	63	1,391	Qualified; but there are no further vacancies.
23	Captain -	G. H. Twemlow - -	1/ 16th „ -	Canada -	275	266	290	196	..	75	255	223	*30*	*20*	*44*	1,305	Ditto.
					297	382	550	*94*	..	..	480	513	172	250	171	2,518	Failed in Modern Languages.
					36	*199*	..	177	..	..	431	418	95	70	115	1,306	„ Mathematics.
					131	254	80	*133*	..	..	366	467	60	..	57	1,284	„ Modern Languages.
					263	*228*	..	227	..	..	336	467	176	..	..	1,206	„ Mathematics.
					39	286	125	*126*	..	..	183	300	102	100	72	1,168	„ Modern Languages.
					130	*179*	..	218	..	..	270	379	121	90	85	1,163	„ Mathematics.
					38	*136*	0	255	..	..	301	399	90	.50	*39*	1,095	„ „
					296	*173*	..	*137*	..	..	261	381	67	..	*12*	709	„ „ and Modern Languages.
1	Captain -	W. Pitman - -	R. M. A. -	Home -	144	326	580	176	140	..	349	474	63	155	136	2,399	Recommended.
2	Lieutenant -	C. W. Fothergill - -	R. M. A. -	„ -	143	336	215	195	..	..	475	571	223	85	121	2,221	Ditto.
					147	*238*	*40*	164	..	..	452	317	130	..	..	1,063	Failed in Mathematics.

Examination of Officers, Candidates for admission to the Staff College, July 1866.

Order.	Rank.	Name.	Corps.	Station.	Index Number.	Mathematics. Obligatory.	Mathematics. Voluntary.	French.	German.	Hindustani.	Military History and Geography.	Fortification.	Military Drawing.	Chemistry.	Geology.	Total.	Remarks.
				Maximum -		*400*	*800*	*300*	*300*	*300*	*900*	*600*	*300*	*300*	*300*	..	
				Minimum -		*250*	..	*150*	*50*	*50*	*150*	*100*	*50*	*50*	*50*	..	
1	Lieutenant -	F. C. H. Clarke - -	Royal Artillery	Home -	36	340	421	195	..	258	516	531	122	150	170	2,703	Recommended.
2	„ -	E. O. Hollist - -	„	„ -	66	340	404	240	240	..	486	498	111	120	76	2,515	
3	„ -	Alfred Logan - -	„	„ -	39	367	463	210	180	..	355	483	112	..	..	2,170	Qualified; but there are no further vacancies for Artillery Officers.
4	Captain -	Henry Bond - -	„	„ -	72	332	401	165	..	..	320	513	86	185	150	2,152	
5	Lieutenant -	L. F. B. Cary - -	2/ Rifle Brigd.	Bengal -	175	332	36	270	..	..	547	527	152	115	165	2,144	
6	Major -	J. Aytoun - - -	Unattached -	Home -	69	321	306	205	100	192	196	472	99	120	100	2,111	
7	Captain -	A. L. Walker - -	99th Regt. -	„ -	40	343	153	205	..	..	471	490	214	100	90	2,066	
8	Lieutenant -	P. C. Story - -	26th „ -	Bombay -	193	289	..	250	..	270	645	450	..	..	135	2,039	
9	„ -	G. M. Cardew - -	67th „ -	Home -	135	377	135	235	..	..	397	484	173	130	100	2,031	
10	Captain -	C. F. Lloyd - - -	1/ 24th „ -	„ -	64	284	181	200	150	..	277	488	155	100	70	1,905	
11	Lieutenant -	S. Flower - - -	2/ 13th „ -	Mauritius -	154	320	245	200	..	..	364	460	165	..	126	1,880	Recommended.
12	„ -	F. C. Lewin - -	85th „ -	Home -	67	302	202	180	..	..	399	472	154	70	85	1,864	
13	Captain -	J. N. Crealock - -	95th „ -	„ -	130	256	44	180	80	172	487	437	123	*40*	60	1,839	
14	Lieutenant -	J. Conran - - -	3rd W.I.R. -	„ -	31	290	207	165	..	..	369	366	110	130	150	1,787	
15	Captain -	J. G. Image - - -	1/ 21st Foot -	„ -	33	290	217	195	..	..	301	526	187	..	..	1,716	
16	Lieutenant -	N. X. Gwynne - -	1/ 20th „ -	„ -	42	295	240	*30*	..	251	375	396	*26*	65	52	1,674	
17	Captain -	G. Webber - - -	1/ 17th „ -	„ -	132	294	65	220	..	..	411	440	80	80	80	1,670	
18	„ -	C. F. Clery - -	32nd „ -	Gibraltar -	241	306	179	242	..	..	396	439	..	55	..	1,617	
19	Lieutenant -	C. F. Colvile - -	54th „ -	Home -	138	327	228	150	..	..	352	458	*24*	*30*	..	1,515	Qualified; but there are no further vacancies.
20	„ -	H. W. Isacke - -	Royal Artillery	„ -	133	349	316	165	..	..	181	352	71	..	..	1,434	
21	„ -	S. W. Bell - - -	81st Regt. -	„ -	70	253	96	205	..	..	309	350	150	*40*	52	1,415	
22	„ -	H. A Little - -	1/ 7th „ -	„ -	141	281	..	205	..	272	201	370	*10*	..	..	1,329	
					139	327	192	*110*	..	..	213	475	93	65	96	1,461	Failed in Modern Language.
					226	*242*	*122*	240	..	..	460	433	95	50	140	1,418	„ Mathematics.
					242	*234*	..	190	..	*33*	333	471	93	..	80	1,167	„ „
					227	*240*	*120*	151	..	*30*	216	415	..	60	135	977	„ „
					61	*232*	..	*75*	*80*	..	216	367	83	..	..	666	„ „ and Modern Languages.
					151	*94*	..	*40*	..	..	*78*	181	57	..	..	238	„ „ „

Examination of Officers, Candidates for admission to the Staff College, July 1867.

Order.	Rank.	Name.	Corps.	Station.	Index Number.	Mathematics. Obligatory.	Mathematics. Voluntary.	French.	German.	Hindustani.	Military History and Geography.	Fortification.	Military Drawing.	Chemistry.	Geology.	Total.	Remarks.
				Maximum - -		*400*	*800*	*300*	*300*	*300*	*900*	*600*	*300*	*300*	*300*	..	
				Minimum - -		*250*	..	*150*	*50*	*50*	*150*	*100*	*50*	*50*	*50*	..	
1	Lieutenant	E. F. Chapman - -	R.A. - -	Home - -	141	364	415	234	170	222	667	507	101	140	153	2,973	Recommended.
2	„	E. Baring - -	R.A. - -	„ -	144	301	455	250	230	..	725	518	95	190	205	2,969	Ditto.
3	Captain -	W. H. Knight - -	48th Foot - -	„ -	142	372	300	206	..	275	640	445	194	205	226	2,863	Ditto.
4	Lieutenant	J. Boughey - -	62nd Foot - -	„ -	69	341	300	228	..	..	613	474	168	180	204	2,508	Ditto.
5	Captain -	W. Kemmis - -	R.A. - -	„ -	139	339	330	163	..	..	745	463	108	175	160	2,483	Qualified, but no further vacancy for R.A.
6	„	A. S. Cameron, V.C. -	2/ 25th Foot -	„ -	135	258	145	235	250	..	702	490	138	135	129	2,482	Recommended.
7	Lieutenant	H. Spalding - -	104th Foot -	Bengal -	2 A	307	210	273	205	275	565	373	..	145	..	2,353	Ditto.
8	„	T. Jessop - - -	2nd Dragoons -	Home -	45	394	535	210	..	..	695	468	*33*	..	..	2,302	Ditto.
9	„	C. R. Tylden - -	70th Foot - -	„ -	60	351	400	202	..	..	638	451	150	..	106	2,298	Retired from the service.
10	„	D. Beaumont - -	80th Foot - -	„ -	136	352	245	240	..	258	425	306	155	115	147	2,243	Recommended.
11	„	W. H. King-Harman	R.A. - -	Canada -	2	359	320	188	*40*	..	497	526	92	85	154	2,221	Qualified, but no further vacancy for R.A.
12	„	F. Wilson - -	1st Rifle Brigade	Home -	138	258	20	231	..	..	685	536	70	200	198	2,198	Recommended.
13	Captain -	A. S. Quill - - -	R. C. Rifles -	Canada -	1	286	280	206	..	..	518	446	139	110	211	2,196	Ditto.
14	Lieutenant	W. S. Cooke - -	1/ 22nd Foot -	Nova Scotia	888	289	80	249	245	..	608	406	216	..	97	2,190	Ditto.
15	Captain -	A. B. Tulloch - -	69th Foot - -	Home - -	42	255	..	219	..	..	678	466	144	180	229	2,171	Ditto.
16	Lieutenant	C. W. Lloyd - -	1/ 16th Foot -	Canada -	3	326	220	195	..	..	620	465	90	90	80	2,086	Ditto.
17	„	C. H. Walsh - -	44th Foot - -	Home - -	36	284	60	248	..	231	517	411	82	82	127	2,042	Ditto.
18	Captain -	C. Frankland - -	103rd Foot -	„ -	72	251	50	184	..	265	502	360	*45*	0	117	1,729	Ditto.
19	Lieutenant	A. F. Terry - -	1/ 60th Rifles -	Malta - -	160	313	170	190	..	..	..	165	141	70	205	1,254	Qualified, but no further vacancy.
					999	*160*	*100*	176	..	..	466	408	140	..	..	1,190	Failed in Mathematics.
					4	*139*	..	..	..	250	..	348	200	..	..	798	Withdrew.
					66	*138*	..	..	..	270	..	360	..	..	..	630	Withdrew.
	Captain -	H. C. N. Blanckley -	Royal Marines -	Home - -	62	299	110	197	..	..	566	468	168	90	183	2,081	Recommended.

Examination of Officers, Candidates for admission to the Staff College, July 1868.

Order.	Rank.	Name.	Corps.	Station.	Index Number.	Mathematics. Obligatory.	Mathematics. Voluntary.	French.	German.	Hindustani.	Military History and Geography.	Fortification.	Military Drawing.	Chemistry.	Geology.	Total.	Remarks.
				Maximum - -		*400*	*800*	*300*	*300*	*300*	*900*	*600*	*300*	*300*	*300*	..	
				Minimum - -		*250*	..	*150*	*50*	*50*	*150*	*100*	*50*	*50*	*50*	..	
1	Lieutenant	L. M. Carmichael -	5th Lancers -	Bengal -	205	387	614	205	174	268	598	457	93	57	97	2,950	Recommended.
2	,,	J. F. Maurice - -	R.A. - -	Home -	135	380	660	216	65	..	764	397	58	125	123	2,788	Ditto.
3	Captain -	C. L. Harvey - -	71st Foot - -	,, -	69	346	232	237	161	262	638	553	75	100	115	2,719	Ditto.
4	Lieutenant	C. C. King - - -	R. M. Artillery -	,, -	147	359	468	195	..	..	646	541	200	118	186	2,713	Ditto. Supernumerary.
5	Captain -	F. S. Russell - -	14th Hussars -	,, -	63	359	528	208	117	..	763	457	81	*43*	167	2,680	Ditto.
6	,,	C. Clery - - -	32nd Foot - -	,, -	72	346	455	223	..	..	750	405	..	172	117	2,468	Ditto.
7	Lieutenant	E. M. Roe - -	1/23rd Foot -	Bombay -	201	375	402	208	..	265	533	490	118	..	..	2,391	Ditto.
8	,,	H. A. Little - -	2/7th Foot -	Home -	33	318	254	153	112	291	605	403	..	100	151	2,387	Ditto.
9	Major -	F. R. G. Grant -	H. P. - -	,, -	130	316	265	250	190	272	638	390	..	..	63	2,384	Ditto.
10	Lieutenant	A. R. Savile - -	18th Foot - -	,, -	136	393	391	219	92	..	585	418	95	*25*	190	2,383	Ditto.
11	Captain -	C. H. Boileau - -	61st Foot - -	Cape -	203	372	376	177	..	289	663	437	*35*	*33*	65	2,370	Ditto.
12	Lieutenant	R. L. Anstruther -	Rifle Brigade -	Home -	60	352	160	205	58	..	670	547	138	68	163	2,361	Ditto.
13	,,	E. H. Sartorius -	59th Foot - -	,, -	139	326	130	216	214	..	665	432	118	87	150	2,338	Ditto.
14	Captain -	H. L. Mitchell -	R. A. - -	,, -	138	339	310	217	..	217	486	455	85	96	122	2,327	Ditto.
15	Lieutenant	C. H. Gardner -	2/12th Foot -	Bengal -	204	341	186	125	..	235	632	451	103	..	138	2,211	Ditto.
16	,,	C. F. Colvile - -	54th Foot -	Home -	42	314	329	150	..	..	585	474	63	85	112	2,112	Ditto.
17	Captain -	M. W. E. Gosset -	54th Foot - -	,, -	144	320	54	150	..	250	556	429	142	52	104	2,057	Qualified, but no further vacancy.
18	Lieutenant	A. B. Onslow - -	43rd Foot - -	,, -	141	311	246	84	..	260	538	413	88	*27*	110	2,050	Ditto ditto.
19	,,	J. C. Russell - -	10th Hussars -	,, -	133	314	144	210	*48*	..	589	440	125	*47*	122	1,944	Ditto ditto.
20	,,	C. K. Brooke - -	1/15th Foot -	Bermuda -	207	282	327	160	..	..	410	421	55	71	120	1,846	Ditto ditto.
21	,,	C. H. Bunbury -	71st Foot - -	Home -	66	284	176	187	71	..	496	419	85	..	85	1,803	Ditto ditto.
22	,,	J. Spence - -	86th Foot - -	Mauritius -	210	365	293	185	103	..	297	274	90	*30*	118	1,725	Ditto ditto.
23	,,	J. E. C. C. Lindsay -	30th Foot - -	Home -	132	312	401	223	..	..	334	240	68	*43*	95	1,673	Ditto ditto.
24	,,	H. Atkinson - -	99th Foot - -	,, -	45	352	220	188	..	..	518	394	*35*	..	..	1,672	Ditto ditto.
25	,,	A. Hales - -	C. M. Rifles -	,, -	39	250	4	..	230	..	283	259	..	..	..	1,026	Ditto ditto.
					142	304	418	*106*	*37*	..	465	454	52	*35*	101	1,794	Failed in Languages.
					209	315	300	*125*	..	*35*	388	343	80	88	135	1,649	Failed in Languages.
					36	*193*	*40*	*100*	..	..	312	298	70	51	130	861	Failed in Mathematics and in Languages.

Appendix V.

Report of the Examination of the Officers of the Senior Division of the Staff College, December 1865.

Order of Merit.	Rank and Name.	Corps.	Index Number.	Mathematics. 1st Year.	Mathematics. Practical Astronomy.	Mathematics. 2nd Year.	Fortification and Artillery.	Military Drawing, Surveying, and Reconnoisance.	Military History.	Military Administration and Law.	French.	German.	Hindustani.	Natural Sciences.	Experimental Sciences.	Total.	Remarks.
		Maximum Minimum		300 ..	200 ..	400 ..	600 300	700 350*	600 300	600 300	400 ..	400 ..	400 ..	400 ..	400 ..	.. 2,500	* Obligatory.
1	Capt. A. W. J. Montgomerie	20th Hus.	12	293	171	329	546	629	578	518	275	..	355	..	..	3,694	Specially mentioned by examiners in Astronomy, in Military Administration, and in Reconnoissance.
2	Lieut. H. G. MacGregor	17th Foot	22	281	151	353	570	661	483	491	206	..	..	..	301	3,497	Specially mentioned by examiners in Fortification and in Reconnoissance.
3	„ C. C. Suther	R. M. A.	28	289	200	336	535	615	428	454	271	252	..	..	..	3,380	Passed a satisfactory examination in the higher branches of Mthcs. as an extra subject. Specially mentioned by examiner in Astrnmy. and Geodesy.
4	„ C. W. Robinson	Rifle Bde.	20	208	97	264	498	608	495	521	245	..	..	..	296	3,232	Specially mentioned by examiners in Mil. Administration and Legislation, and in Reconnoissance.
5	Lieut.-Col. H. P. Yates†	R. A.	2	226	113	267	447	596	452	446	..	318	..	..	282	3,147	Specially mentioned by examiners in German and in Reconnoissance.
6	Capt. C. W. Willis	33rd Foot	10	..	..	..	502	656	512	490	332	288	..	..	324	3,104	Specially mentioned by examiners in French, Experimental Sciences, and in Reconnoissance.
7	„ G. F. Grant	62nd „	14	258	92	319	472	516	421	457	156	..	..	..	324	3,015	Specially mentioned by examiner in Exp. Sciences.
8	Lieut. H. Knollys	R. A.	24	190	115	250	426	509	448	475	329	255	..	..	..	2,997	Ditto ditto ditto French.
9	Capt. R. J. Maxwell	80th Foot	8	213	110	247	406	473	430	455	327	299	..	..	..	2,960	Ditto ditto ditto German.
10	„ W. Shaw‡	Mil. Train	18	178	79	234	476	580	416	430	242	..	..	..	279	2,914	
11	„ A. G. Wynen§	13th Foot	16	..	..	..	531	497	389	465	324	323	351	..	..	2,880	Ditto ditto ditto ditto.
12	„ C. C. Fitzroy	68th „	4	246	81	258	433	468	408	463	245	..	..	..	244	2,846	Passed an examination in Hindustani as an extra subject.
13	Lieut. A. W. Peyton	3rd „	26	..	..	..	511	613	347	446	298	..	..	332	286	2,833	Specially mentioned by examiners in Military Administration and in Geology.
14	Capt. R. V. Dickens	11th „	6	..	..	..	501	456	433	466	282	..	360	..	273	2,771	
15	2nd Lieut. C. H. Hullett	R. M. A.	30	225	82	259	486	531	378	407	142	..	..	..	232	2,742	

† Lieutenant-Colonel P. Yates joined the College 2nd April 1864.
‡ Captain Shaw, Military Train, was ordered on active service to New Zealand before his first year's residence was completed in 1863, and did not rejoin the College until November 1864.
§ Captain Wynen joined the College 31st March 1864.

PALL MALL

Report of the Examination of the Officers of the Junior Division of the Staff College, December 1865.

Order of Merit.	Rank and Name.	Corps.	Index Number.	Mathematics.	Practical Astronomy.	Fortification.	Military Drawing and Surveying.	Military Art., History, and Geography, with Memoirs.	Military Administration and Legislation.	French.	German.	Hindustani.	Italian.	Persian.	Natural Sciences.	Experimental Sciences.	Total.	Remarks.
		Maximum - -		*300*	*200*	*450*	*300*	*450*	*450*	*400*	*400*	*400*	*400*	*400*	*400*	*400*	..	
		Minimum - -		..	..	*150*	*100*	*150*	*150*	..	..	..	..	..	..	..	*1,400*	
1	Brevet-Major G. D. Barker -	64th Foot	3	270	147	386	236	404	334	..	..	264	..	..	..	250	2,291	Specially mentioned in Fortification.
2	Capt. H. Lock - - -	108th „	11	256	101	377	181	272	294	288	..	347	..	..	..	..	2,116	
3	2nd Capt. J. R. Oliver* - -	R.A. -	23	254	..	354	201	245	293	..	..	333	..	..	364	..	2,044	Specially mentioned in Geology.
4	Capt. W. Madan - - -	49th Foot	13	187	..	340	166	395	378	267	..	..	..	..	277	..	2,010	
5	Lieut. H. C. Deane - - -	17th „	29	..	..	332	151	317	347	292	..	..	..	..	311	235	1,985	
6	Capt. V. Tonnochy - -	81st „	5	162	120	269	213	192	281	..	..	359	..	361	..	..	1,957	Ditto ditto in Persian.
7	Lieut. L. A. Gregson - -	26th „	31	243	163	320	231	251	266	198	..	..	..	..	..	190	1,862	
8	Brevet-Major F. D. Middleton	29th „	1	160	..	316	183	361	313	248	..	..	..	..	..	250	1,831	
9	Lieut. W. J. E. Poole - -	60th „	27	164	..	354	206	338	351	180	..	..	..	..	212	..	1,805	
10	Capt. G. Hatchell - -	60th „	25	..	..	321	258	289	301	..	..	201	..	..	248	165	1,783	Ditto ditto in MilitaryDrawing.
11	Lieut. C. D. E. Parks-Smith -	R.A. -	33	214	56	336	182	243	239	301	159	..	..	..	..	..	1,730	
12	Capt. G. W. F. D. Smith -	5th Foot -	19	208	..	307	172	268	252	286	205	..	..	..	..	..	1,698	
13	„ W. W. Knollys - -	93rd „	7	..	..	306	*99*	358	338	319	110	254	..	..	..	..	1,685	
14	„ G. W. Clutterbuck -	63rd „	21	..	..	219	151	229	270	327	269	..	215	..	..	..	1,680	
15	„ R. Blundell - -	3rd Hus. -	9	218	72	242	151	268	260	200	..	..	..	..	231	..	1,642	
16	„ H. D'O Farrington -	73rd Foot	17	206	..	340	196	246	263	220	..	..	..	..	..	155	1,626	
17	2nd Capt. H. A. D. De Vismes†	R.A. -	15	163	93	300	112	185	217	265	..	..	..	..	250	..	1,585	
			35	203	92	262	*85*	212	283	179	..	..	..	..	..	85	*1,316*	Failed.

* Captain Oliver did not join the College until 15th July
† „ De Vismes did not join the College until 27th March.

Report of the Examination of the Officers of the Senior Division of the Staff College, December 1866.

Order of Merit.	Rank and Name.	Corps.	Index Number.	Mathematics.			Fortification and Artillery.	Military Drawing, Surveying, and Reconnoissance.	Military History.	Military Administration and Law.	French.	German.	Hindustani.	Italian.	Persian.	Natural Sciences.	Experimental Sciences.	Total.	Remarks.
				First Year.	Practical Astronomy.	Second Year.													
		Maximum -		*300*	*200*	*400*	*600*	*700*	*600*	*600*	*400*	*400*	*400*	*400*	*400*	*400*	*400*	..	
		Minimum -		..	..	..	*300*	*350**	*300*	*300*	..	..	..	..	..	..	..	*2,500*	* Obligatory.
1	Brevet-Major G. D. Barker -	64th Foot -	23	270	147	272	580	623	523	471	..	..	350	..	..	..	310	3,546	
2	Captain J. R. Oliver† - -	R.A. - -	55	254	194	308	556	585	415	452	..	..	333	..	..	382	..	3,479	Recommended for employment on Ordnance Survey or in Topographical Department. Captain Oliver did not join the College until the 15th July 1865.
3	„ W. Madan - -	49th Foot -	33	187	109	218	490	534	518	544	275	..	..	..	..	286	..	3,161	
4	„ H. Lock - -	108th „ -	31	256	101	273	468	550	365	439	260	..	347	..	..	..	..	3,059	
5	Lieut. L. A. Gregson‡ - -	26th „ -	45	243	163	203	485	614	416	441	200	..	..	..	..	..	199	2,964	
6	Captain V. Tonnochy - -	81st „ -	25	162	120	150	432	604	347	377	..	..	359	..	361	..	..	2,912	
7	Brevet-Major C. D. C. Ellis -	60th „ -	51	..	..	..	486	568	492	425	345	297	..	..	..	258	..	2,871	
8	Captain G. W. F. D. Smith -	5th „ -	39	208	77	197	442	568	362	410	315	257	..	..	..	..	..	2,836	
9	„ W. J. E. Poole - -	60th „ -	41	164	84	130	486	576	438	491	200	..	..	..	..	254	..	2,823	
10	„ G. Hatchell - -	60th „ -	57	..	..	..	492	662	462	449	..	..	220	..	..	282	243	2,810	
11	Lieut. C. D. E. Parks Smith -	R.A. - -	47	214	56	254	429	535	374	431	215	222	..	..	..	..	..	2,730	
12	Captain W. W. Knollys -	93rd Foot -	27	..	..	..	433	459	467	510	350	220	285	..	..	..	..	2,724	
13	Lieut. H. C. Deane - -	17th „ -	43	..	..	..	400	491	436	457	325	..	..	..	..	331	269	2,709	
14	Brevet-Major F. D. Middleton	29th „ -	21	160	71	116	428	549	439	470	235	..	..	..	..	..	231	2,699	
15	Captain H. D'O Farrington -	73rd „ -	37	206	82	169	418	586	340	401	200	..	..	..	..	..	263	2,665	
16	„ G. W. Clutterbuck -	63rd „ -	53	..	..	..	378	500	349	428	325	299	..	290	..	..	..	2,654	
17	„ R. Blundell - -	3rd Hussars	29	218	72	184	397	478	401	420	200	..	..	..	..	249	..	2,619	
18	Lieut. W. C. Hood - -	2nd Foot -	49	203	92	147	407	546	352	423	200	..	..	..	..	..	194	2,564	
			35	163	93	138	383	499	315	364	250	..	..	..	..	285	..	*2,490*	Failed.

† Captain Oliver passed a good examination in "higher Mathematics" as an extra subject, and also a fair examination in Persian.
‡ Lieutenant Gregson was examined in Hindustani as an extra subject.

REPORT of the Examination of the Officers of the Junior Division of the Staff College, December 1866.

Order of Merit.	Rank and Name.	Corps.	Index Number.	Mathematics.	Practical Astronomy.	Fortification.	Military Drawing and Surveying.	Military Art, History, and Geography, with Memoirs.	Military Administration and Legislation.	French.	German.	Italian.	Hindustani.	Experimental Sciences.	Natural Sciences.	Persian.	Total.	Remarks.
		Maximum -		*300*	*200*	*280*	*270*	*300*	*300*	*400*	*400*	*400*	*400*	*400*	*400*	*400*	..	
		Minimum -		..	..	*90*	*90*	*100*	*100*	..	..	..	..	..	..	..	*1,200*	
1	Lieut. L. D. T. Provost - -	47th Foot -	58	278	149	232	234	221	258	330	..	..	..	..	292	..	1,994	
2	„ J. W. Hozier - -	2nd Dragoons	54	262	180	265	216	276	290	..	355	..	..	55	..	..	1,899	
3	„ H. H. Griffiths - -	59th Foot -	52	271	188	261	230	174	237	230	..	..	..	..	243	..	1,834	
4	„ C. W. Fothergill -	R. M. A. -	62	233	90	263	268	203	218	210	..	..	..	..	318	..	1,803	
5	„ W. P. Mortimer -	8th Foot -	40	237	131	146	161	171	221	345	..	..	320	..	..	..	1,732	
6	„ Hon. J. Abercromby -	R. Brigade -	46	..	..	213	175	224	227	325	..	200	..	..	339	..	1,703	
7	„ Hon. R. Abercromby -	60th „ -	56	283	198	177	*84*	232	268	270	..	..	..	245	..	..	1,673	
8	„ O. W. Braine - -	30th Foot -	50	282	162	210	169	187	224	280	..	..	..	145	..	..	1,659	
9	Captain H. T. Butler* - -	4th Hussars	36	229	34	205	222	168	212	305	..	..	..	190	..	..	1,565	
10	Lieut. W. F. Nelson - -	R. A. - -	44	261	56	209	174	209	259	290	..	..	..	95	..	..	1,553	
11	Captain C. Campbell - -	6th Foot -	38	..	..	196	178	172	227	..	..	..	300	..	235	235	1,543	
12	„ W. Pitman - -	R. M. A. -	60	269	184	220	185	177	186	230	..	..	..	75	..	..	1,526	
13	Lieut. G. E. Boyle - -	R. B. - -	64	237	..	198	163	193	237	250	..	180	..	..	..	..	1,458	Lieutenant Boyle did not join the College until the 19th April.
14	„ R. H. Fawcett - -	33rd Foot -	48	..	..	182	162	196	219	225	..	..	355	65	..	..	1,404	
15	„ H. M. Moorsom - -	R. A. - -	42	..	..	226	157	180	244	225	220	..	..	145	..	..	1,397	
16	Captain G. U. Prior - -	100th Foot -	34	201	79	230	174	223	229	75	..	..	..	70	..	..	1,281	
			32	..	..	220	228	173	212	255	75	..	..	..	..	..	*1,163*	Failed.

* Captain Butler passed a fair examination in German as an extra subject. He was also examined in Spanish.

Report of the Examination of the Officers of the Senior Division of the Staff College, December 1867.

Order.	Rank.	Name.	Corps.	Index Number.	Mathematics. First Year.	Mathematics. Practical Astronomy.	Mathematics. Second Year.	Fortification and Artillery.	Military Drawing, Surveying, and Reconnoissance.	Military History.	Military Administration.	Military Legislation.	French.	German.	Hindustani or Italian.	Persian.	Natural Sciences.	Experimental Sciences.	Total.	Remarks.
			Maximum - -		*300*	*200*	*400*	*600*	*700*	*600*	*500*	*100*	*400*	*400*	*400*	*400*	*400*	*400*	..	
			Minimum - -		..	..	..	*300*	*350**	*300*	*300*		..	..	..	..	..	..	*2,500*	* Obligatory.
1	Lieutenant	J. W. Hozier -	2nd Dragoons -	71	262	180	337	567	619	569	483	93	..	355	..	..	..	371	3,836	† Lieut. Braine passed a good examination in the Higher Course of Mathematics as an extra subject. Recommended for employment in Ordnance Survey or in Topographical Department.
2	„	L. De T. Prevost -	47th Foot -	73	278	149	305	484	643	459	429	75	330	..	..	..	352	..	3,504	
3	Captain -	H. H. Griffiths -	59th „ -	57	271	188	331	524	616	393	408	64	245	..	..	..	303	..	3,343	
4	Lieutenant	O. W. Braine -	30th „ -	69	282	162	338	443	529	405	392	79	349	..	..	..	..	354	3,333†	
5	Captain -	C. W. Fothergill -	R. M. Artillery	77	233	90	254	550	683	405	373	56	266	..	..	..	318	..	3,228	
6	„	W. Pitman -	„	75	269	184	299	434	540	368	333	65	310	..	..	..	..	320	3,122‡	‡ Capt. Pitman, R. M. A., passed a very good examination in the Higher Course of Mathematics as an extra subject; and would have been recommended for employment on the Ordnance Survey or in the Topographical Department, had he been an Officer in the Army. This Officer is recommended to the notice of the Lords of the Admiralty.
7	Lieutenant	W. F. Nelson -	R. A. - -	65	261	56	268	439	522	448	429	56	295	..	..	..	..	315	3,089	
8	Captain -	G. U. Prior -	100th Foot -	51	201	79	230	467	575	478	389	65	256	..	..	..	..	315	3,055	
9	Lieutenant	G. E. Boyle - -	Rifle Brigade -	79	237	105	267	429	514	421	410	73	315	..	Italian 240	..	..	..	3,011§	§ Did not join the College until April 1866.
10	Captain -	H. T. Butler -	4th Hussars -	53	229	34	307	427	595	342	363	63	305	..	Hindustani	..	..	305	2,970	
11	Lieutenant	W. P. Mortimer -	80th Foot -	61	237	131	234	330	503	375	377	71	345	..	320	..	..	..	2,923	
12	„	H. M. Moorsom -	R. A. - -	63	..	..	..	471	513	397	418	72	347	330	..	..	..	290	2,838	
13	„	Honble. J. Abercromby -	Rifle Brigade -	67	..	..	..	455	558	466	405	70	325	..	Italian 215	..	329	..	2,823	
14	Captain -	R. H. Fawcett - -	33rd Foot -	59	..	..	..	409	513	422	384	72	296	..	Hindustani 355	..	.	261	2,712	
15	„	C. Campbell -	86th „ - -	55	..	..	..	389	527	373	381	56	..	..	300	247	266	..	2,539	

Lieutenant Hozier passed a good examination in French, Italian, Dutch, and Modern Greek, and a fair examination in Spanish, as extra subjects.
Captain Prior was examined in Natural Sciences as an extra subject.
Captain Butler was examined in Hindustani as an extra subject.
Captain Fawcett passed a fair examination in Marathi as an extra subject.
Captain Pitman was examined in Natural Sciences as an extra subject.
Captain Butler when in the Junior Division, passed a fair examination in German as an extra subject, besides being examined in Spanish.

Report of the Examination of the Officers of the Junior Division of the Staff College, December 1867.

Order.	Rank.	Name.	Corps.	Index Number.	Fortification.	Drawing and Surveying.	Military Art, History, and Geography.	Military Administration.	French.	German.	Hindustani.	Total Obligatory.	Mathematics. Lower Course.	Mathematics. Higher Course.	Practical Astronomy.	French.	German.	Hindustani.	Persian.	Italian.	Natural Sciences.	Experimental Sciences.	Total.	Remarks.
			Maximum - -		*280*	*270*	*300*	*300*	*400*	*400*	*400*	..	*400*	*500*	*200*	*400*	*400*	*400*	*400*	*400*	*400*	*400*	..	
			Minimum - -		*90*	*90*	*100*	*100*	..	..	..	*800*	..	..	..	..	..	..	..	..	..	..	..	
1	Lieutenant	C. O. Hollist - -	R. A. - -	98	229	172	233	213	..	309	..	1,156	..	..	139	300	..	..	..	280	..	..	1,875	
2	„	F. C. H. Clarke - -	„ - - -	100	225	243	258	251	..	..	340	1,317	..	179	120	..	..	..	..	..	..	82	1,698	
3	„	A. L'E. H. Holmes*	79th Foot - -	110	189	167	203	172	..	..	370	1,101	315	169	..	..	..	..	..	..	..	..	1,585	
4	Captain -	J. N. Crealock	95th „ - -	86	209	197	257	245	288	..	..	1,196	..	..	..	..	..	300	..	..	..	..	1,496	
5	„	N. X. Gwynne -	20th „ - -	96	177	160	219	227	..	..	360	1,143	253	..	..	..	..	..	93	..	..	..	1,489	
6	„	G. N. Cardew	67th „ - -	94	210	194	245	265	288	..	..	1,202	42	..	..	..	..	..	..	..	113	..	1,357	
7	Major -	J. Aytoun -	Unattached -	82	213	143	218	211	268	..	..	1,053	171	..	..	..	..	..	..	..	95	..	1,319	
8	Captain -	A. L. Walker - -	99th Foot - -	92	247	203	232	249	274	..	..	1,205	..	..	..	..	..	..	..	..	96	..	1,301	
9	„	J. G. Image - - -	21st „ - -	84	211	199	195	210	211	..	..	1,026	212	..	..	..	..	..	..	..	55	..	1,293	
10	„	G. D. Webber - -	2nd W. I. Regt. -	88	214	176	210	234	324	..	..	1,158	..	..	..	..	..	..	..	..	84	30	1,272	
11	Lieutenant	L. F. B. Cary - -	Rifle Brigade -	102	210	175	260	232	363	..	..	1,240	..	..	..	..	..	..	..	..	22	..	1,262	
12	„	S. Flower - - -	13th Foot - -	106	204	175	212	174	320	..	..	1,085	104	..	..	..	..	..	..	..	60	..	1,249	
13	Captain -	C. F. Lloyd - -	24th „ - -	90	198	160	208	228	264	..	..	1,058	14	..	..	..	105	..	..	..	..	..	1,177	
14	Lieutenant	J. Conran - - -	3rd W. I. Regt. -	104	200	211	191	196	134	..	..	932	96	..	..	..	..	..	..	..	98	..	1,126	
15	„	F. C. Lewin - -	85th Foot - -	108	209	167	227	207	230	..	..	1,040	74	..	..	..	..	..	..	..	..	..	1,114	

* Lieutenant Holmes passed a fair examination in French as an extra subject.

RETURN showing the result of the Examination of the Senior Division of the Staff College, December 1868.

Order of Merit.	Rank and Name.	Corps.	Index Number.	Obligatory Subjects.								Voluntary Subjects.										Remarks.
				Fortification and Artillery.	Military Drawing, Surveying, and Reconnoissance.	Military History.	Military Administration.	Military Legislation.	French.	German.	Hindustani.	Total Obligatory.	Mathematics. Lower Course.	Mathematics. Higher Course.	Mathematics. Practical Astronomy.	French.	German.	Hindustani.	Persian.	Italian.	Geology.	Chemistry.	Total.	
		Maximum -		600	700	600	600		400	400	400	..	400	300	200	400	400	400	400	400	400	400	..	
		Minimum -		300	350	300	300		200	200	200	1,800	240	300	120	240	240	240	240	240	240	240	..	
1	Lieut. F. C. H. Clarke* -	R. A. -	1	506	633	527	504		..	..	340†	2,510	..	320	188	..	..	..	..	..	..	330	3,348‡	‡ Passed a good examination in the higher course of Mathematics, and in Topography. Recommended for employment on the Ordnance Survey or in Topographical Department.
2	Captain G. M. Cardew -	67th Foot -	4	449	583	495	506		329	..	..	2,362	282	..	143	..	..	..	..	..	346	..	3,133	
3	Lieut. A. L'E H. Holmes	79th „ -	12	389	535	423	353		..	..	370†	2,070	315†	323	153	..	..	..	..	..	..	..	2,861§	§ Ditto.
4	Captain A. L. Walker -	99th „ -	8	482	588	494	484		355	..	..	2,403	..	..	..	..	237	..	..	..	324	..	2,727	
5	Lieut. E. O. Hollist -	R. A. -	10	472	558	460	436		..	323	..	2,249	..	..	162	300†	..	..	..	230	..	..	2,711	
6	Captain J. G. Image -	21st Foot -	13	447	594	379	440		315	..	..	2,175	266	..	..	..	..	..	..	..	254	..	2,695	
7	„ N. X. Gwynne -	77th „ -	6	377	511	450	441		..	..	360†	2,139	235	..	137	..	..	..	305	..	..	..	2,581	
8	„ J. N. Crealock -	95th „ -	2	410	576	489	459		338	..	..	2,272	..	..	..	..	151	300†	..	..	..	..	2,572	
9	Major J. Aytoun -	Unattached	5	414	496	472	426		341	..	..	2,149	119	..	..	..	..	..	..	..	311	..	2,460	
10	Captain G. D. Webber -	2nd W. I. R.	7	408	542	445	438		324†	..	..	2,157	..	..	..	..	..	..	..	..	143	240	2,397	
11	Lieut. L. F. B. Cary -	R. B. -	14	418	539	484	446		363†	..	..	2,250	..	..	..	..	..	..	..	..	..	..	2,250	
12	„ F. C. Lewin -	85th Foot -	3	382	566	454	416		335	..	..	2,153	145	..	..	..	..	..	..	..	..	..	2,153	
13	„ S. Flower -	13th „ -	9	397	513	419	368		320†	..	..	2,017	90	..	..	..	..	..	..	..	..	..	2,017	
	Captain C. F. Lloyd -	24th „ -	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Sick Leave.

* Lieut. Clarke passed a good examination in French as an extra subject.

† Passed in December 1867.

RETURN showing the result of the Examination of the Junior Division of the Staff College, December 1868.

Order of Merit.	Rank and Name.	Corps.	Index Number.	Obligatory Subjects.							Total Obligatory.	Voluntary Subjects.										Total.	Remarks.
				Fortification.	Drawing and Surveying.	Military Art, History, and Geography.	Military Administration.	French.	German.	Hindustani.		Mathematics. Lower Course.	Mathematics. Higher Course.	Practical Astronomy.	French.	German.	Hindustani.	Spanish.	Italian.	Natural Sciences.	Experimental Sciences.		
		Maximum - -		*280*	*270*	*300*	*300*	*400*	*400*	*400*	..	*400*	*500*	*200*	*400*	*400*	*400*	*400*	*400*	*150*	*90*	..	
		Minimum - -		*90*	*90*	*100*	*100*	*133*	*133*	*133*	*800*	..	..	..	..	..	..	..	..	..	..	..	
1	Captain W. H. Knight -	48th Foot -	20	240	249	268	224	..	..	336	1,317	..	..	165	379	..	..	..	225	..	..	2,086	
2	Lieut. E. Baring* - -	R. A. - -	25	252	207	278	265	..	318	..	1,320	324	10	175	..	..	..	..	..	..	..	1,829	
3	„ W. S. Cooke - -	22nd Foot -	29	248	236	242	235	380	..	..	1,341	..	..	..	..	345	..	..	100	..	..	1,786	
4	Captain P. C. Story - -	26th „ -	36	231	240	198	251	347	..	..	1,267	..	..	..	..	..	375	..	..	116	..	1,758	
5	Lieut. T. Jessop - -	2nd Dragoons	30	198	184	244	232	312	..	..	1,170	299	252	..	..	..	..	..	..	..	..	1,721	
6	Captain H. Spalding† -	104th Foot -	34	168	164	217	196	374	..	..	1,119	304	..	..	..	..	..	275	..	..	..	1,698	Joined the College 20th March.
7	Lieut. C. H. Walsh - -	44th „ -	28	207	201	215	233	382	..	..	1,238	..	..	..	..	..	335	..	..	103	..	1,676	
8	Captain A. S. Quill - -	R. C. Rifles -	22	224	232	257	231	341	..	..	1,285	262	..	..	..	..	..	..	..	126	..	1,673	
9	Lieut. J. Boughey - -	62nd Foot -	32	231	238	239	241	304	..	..	1,253	300	..	..	..	..	..	..	..	117	..	1,670	
10	Captain C. Frankland -	103rd „ -	33	159	179	183	211	..	..	371	1,103	..	..	..	330	..	..	127	..	..	..	1,560	
11	Lieut. D. Beaumont -	80th „ -	26	230	189	202	255	348	..	..	1,224	..	..	..	..	..	305	..	..	..	..	1,529	
12	„ F. Wilson - -	Rifle Brigade	27	231	162	232	253	332	..	..	1,210	..	..	..	..	..	..	..	..	125	68	1,403	
13	Captain A. B. Tulloch -	69th Foot -	24	231	204	205	259	285	..	..	1,184	..	..	..	..	..	..	..	..	118	61	1,363	
14	„ A. S. Cameron, V. C.	25th „ -	21	242	241	231	231	..	272	..	1,217	..	3	..	111	..	..	..	..	..	..	1,331	
15	„ H. C. N. Blanckley -	Royal Marines	23	178	217	193	201	361	..	..	1,150	..	..	..	..	..	..	..	..	114	38	1,302	
16	Lieut. E. F. Chapman -	R. H. Artillery	35	160	107	138	187	339	..	..	931	309	..	..	..	..	..	..	..	..	..	1,240	Did not join the College until the commencement of the Second Term.
17	„ C. W. Lloyd. -	16th Foot -	31	219	230	186	172	312	..	..	1,119	..	..	..	..	..	..	..	..	..	..	1,119	

Lieut. Baring passed a very good examination in French as an extra subject.

† Captain Spalding passed a fair examination in Italian as an extra subject.

Appendix VI.

Examination Papers.
Royal Military College, Sandhurst.—Commission Class.
December 1868.

Fortification.

Obligatory.—Lieut.-Col. Hutchinson, R.E.

1. Sketch the profile of the parapet (not including the ditch) of a field-work of ordinary command on level ground. Mark on it the names, dimensions, and slopes of the different parts.

2. Under what circumstances should a glacis be employed in a field-work? What considerations regulate its height and superior slope?

3. Describe the method of forming a fascine revetment, and the additional precautions to be taken if the soil is weak.

4. What considerations determine the minimum size of the salient angles of field-works?

5. Sketch the plan of the interior crest of two adjacent fronts of a field bastioned fort constructed on a pentagon, having a side of 140 yards. State the names and dimensions of the various lines and angles of the trace.

6. Explain the following terms used in Defilade:—

Plane of Defilade.
Plane of site.
Tangent plane.

7. Show by a sketch how the excavation of a ditch 9 feet deep, the escarp and counterscarp of which slope $\frac{2}{1}$ and $\frac{3}{1}$ respectively, the width at the top being 12 feet, should be carried on in easy soil. How many hours ought the excavation to take if the diggers are arranged at intervals of 6 feet?

8. What are the points to be principally attended to in arranging the works of a bridge-head?

9. A field-work is to be thrown up on the summit of a hill, the sides of which slope gently till they join a plain below. Show by a profile how the position of the crest of the work must be determined, so that it may be retired as much as possible from the brow of the hill consistently with its musketry fire defending the slopes of the hill and plain below.

10. In what description of rivers may trestle-bridges be used? Sketch a side and end elevation of an ordinary trestle, marking the names of the different parts.

11. Sketch the profiles of a countersloping full revetment and of a sloping demi-revetment adapted to a parapet of the same relief. What are the respective merits of the two as regards security against escalade and against being breached?

12. Describe the mode of tracing the escarp of the body of the place of Vauban's first system applied to a square. What defects have the bastions as thus constructed?

13. For what objects are parallels constructed at a siege? Sketch the finished profile of the first parallel, marking dimensions.

14. Describe the position of the breaches and breaching batteries that would have to be made in the attack of Vauban's first system.

Fortification.

Voluntary.—Lieut.-Col. Hutchinson, R.E.

1. Describe the object and construction of the traverse at the gorge of the ditch of the ravelin of the modern French system.

2. What are counterguards? What is their ordinary object? Show by a sketch how they are best arranged before the faces of the bastions and ravelin of a bastioned front of fortification.

3. Explain the operation of sinking a shaft in loose sand, from the bottom

of which a gallery is to be driven. The shaft is to be lined with cases. Give the dimensions, and the average rate of progress of the work.

4. What charge of powder must be used in ordinary soil to produce a two-lined crater, the line of least resistance being 20 feet? Sketch a profile of the crater, showing all the effects produced by the explosion, and mark on it the names and dimensions of the different lines.

5. What advantages does the polygonal possess over the bastioned trace with respect to both the maximum and minimum length of the exterior side?

6. What is the general shape of the new detached forts round our principal dockyards? How far are they from the main work and from each other? What conditions has each fort to fulfil?

Surveying.—Captain Festing, R.E.

1. Explain briefly what is meant by a "Scale of Shade." Show as accurately as you can the character of shade you would use for the representation of each of the following slopes :—5°, 15°, 25°, 30°.

2. Draw, on a scale of 2 inches to a mile, a diagram of a triangulation for a survey of about 6 square miles of country, assuming a base line 1,500 yards long near the middle of the survey. Explain how you would fix the position of those stations which are in or near to the prolongation of the base.

3. Plot the following observations of a traverse survey on a scale of 8 inches to a mile :—

Forward angle A to B	15° 20′
Distance	875 links
Forward angle B to C	357° 45′
Distance	750 links
Forward angle C to D	265° 15′
Distance	350 links
Forward angle D to E	192° 30′
Distance	1,115 links

4. Explain how, in sketching ground over which you have made a triangulation, you fix your position at any point by help of a prismatic compass.

5. The back sight to A made with a spirit-level is 2·75 feet, the fore sight to B 12·25 feet, the distance AB is 430 links; the back sight to B is 3·45 feet, and the fore sight to C is 9·78 feet, distance 280 links.

Show how you would enter these observations in your book, and, from the supposed book, plot the section.

6. Explain the principle of construction of the eye-level which you use, and how by its help you determine the contours in sketching ground.

Military History.—Major Colley.

Campaign of 1814.

1. Why were the course and direction of the rivers and great roads specially favourable to Napoleon's operations in this campaign?

2. Explain the importance of Brienne and Lesmont in the first period of operations (27th Feb. to 3rd March).

3. Show (on map) Blucher's dispositions for attack at La Rothière, and describe the (tactical) results of the battle. Were these as decisive as they should have been? Give reasons for your opinion.

4. Explain how the Seine aided Napoleon and the Allies alternately in the operations from the 9th to 20th February.

5. Show on the general map the position of the armies about the Marne when Napoleon occupied Champaubert on the 10th February. What advantages had he so far gained by his march against Blucher?

6. Show on the general map the position of the armies about the Seine when Napoleon reached Nangis on the 17th February. What should his

object then have been? And how do you consider that could best have been attained?

7. Narrate the operations of Marshals Mortier and Marmont when attacked by Blucher (23rd February to 1st March).

Was Napoleon justified in crossing the Aisne to attack Blucher (5th March).

Give reasons for your opinion.

MATHEMATICS.—Rev. CANON HEAVISIDE.

Section I.

1. Reduce to its lowest terms $\frac{28}{33}\frac{13}{95}$; divide $\frac{7}{12}$ of $\frac{13}{21}$ by $\frac{39}{48}$.

2. Find the cost of travelling 370 miles by a railway, when it costs 4*l.* 7*s.* 6*d.* to travel 250 miles; express the result as the decimal of 1*l.*

3. The simple interest on 533*l.* 6*s.* 8*d.* for five years is 120*l.*; find the rate per cent.

4. Prove $(1{\cdot}25)^2\times(\cdot8)^2=1$. Extract the square root of 400·4001.

5. Reduce to their simplest forms: —

(1.) $\dfrac{a+x}{a-x}-\dfrac{a-x}{a+x}-\dfrac{ax}{a^2-x^2}$.

(2.) $\dfrac{(a+x)^3\times(a-x)^3}{(a^2-x^2)^2}$.

(3.) $\dfrac{3x^2-2ax-a^2}{2x^2-3ax+a^2}$.

6. Solve the following equations:—

(1.) $\dfrac{3x+117}{2x-117}=60$,

(2.) $4x-x=(7{\cdot}056)^{\frac{3}{2}}$

by the aid of the logarithmic tables.

7. A number consists of two digits of which the digit in the unit's place is the greatest. When the number is divided by the sum of its digits the quotient is 4, but if 12 be subtracted from the number, and, thus diminished, it be divided by the difference of its digits, the quotient is 9: find the number.

8. Define a parallelogram; describe a parallelogram that shall be equal to a given triangle and have one of its angles equal to a given rectilineal angle.

9. If a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part of it produced, together with the square of half the line bisected, is equal to the square of the straight line which is made up of the half and part produced.

10. The angles in the same segment of a circle are equal to one another.

11. If one acute angle in a right-angled triangle be 37° 43′, find the other acute angle.

At 60 feet from the base of a tower on level ground the angle of elevation of the top of the tower was found to be 60½ degrees: find the height of the tower.

12. Find the content (1) of a right cylinder, the radius of whose base is 10 feet, and whose height is 15 feet, (2) of a right cone having the same circular base and the same altitude as the cylinder.

MATHEMATICS.—Rev. CANON HEAVISIDE.

Section II.

1. Reduce $\dfrac{2+3\sqrt{-1}}{7+4\sqrt{-1}}+\dfrac{2-3\sqrt{-1}}{7-4\sqrt{-1}}$.

App. VI.

Royal Military College.

2. Solve the following equations :—

$$(1.)\ 3(x-2)^2=8(x-2)+3.$$

$$(2.)\ \left.\begin{aligned}\frac{1}{x}+\frac{1}{y}&=1\\ \frac{1}{x^2}+\frac{1}{y^2}&=5\end{aligned}\right\}$$

3. Insert 7 arithmetic means between $-\frac{1}{5}^3$ and $\frac{3}{5}$. There are three numbers in geometrical progression whose sum is 42, the middle term is equal to $\frac{2}{3}$rds of the difference of the extremes, find the numbers.

4. Prove $\log_{10}P\times R^n=\log_{10}P+n\log_{10}R$; find the sum of money that will amount to 760*l.* in four years at 5 per cent. compound interest.

5. When are four magnitudes said to be proportionals? When are they in continued proportion?

If four straight lines are proportionals, the greatest and least together are greater than the other two.

6. If one angle of a triangle be divided into two equal angles by a straight line which also cuts the base, the segments of the base shall have the same ratio which the other sides of the triangle have to one another.

B A C is an angle of a triangle of which C A E is the adjacent exterior angle; if B A C be bisected by A D, show that the line drawn through A at right angles to A D will bisect the exterior angle C A E.

7. Define a solid angle; show that if a solid angle be contained by three plane angles, any two of them are greater than the third.

8. Prove for any angles

$$\frac{\sin A-\sin B}{\sin A+\sin B}=\frac{\tan\frac{A-B}{2}}{\tan\frac{A+B}{2}},$$

and for any triangle

$$\tan\frac{A-B}{2}=\frac{a-b}{a+b}\cdot\cot\frac{C}{2},$$

where *a*, *b*, *c* are the sides subtending the angles A, B, C respectively.

9. From the top of a hill two mile-stones were observed in the same vertical plane, and on a horizontal road running from the base of the hill; the angle of depression of the nearest mile-stone was 14° 3′, that of the furthest 3° 56′: find the height of the hill.

10. If the diameter of a circle be 50 feet, find the area of a segment of the circle whose height is 18 feet.

11. A pyramid has for its faces four equilateral triangles with 30 feet in side, find its content.

Mathematics.—Rev. Canon Heaviside.

Section III.

1. Illustrate the statement that "the tension of a string is the same throughout." Can the direction of this tension be changed without altering its magnitude? Can two unequal forces act on a particle and keep it at rest, (1) if the particle be without weight, (2) if it have weight?

B and C are points in the same horizontal line to which the ends of a string C A B are fastened; a weight W (10 lbs.) is supported at A, hanging freely by means of a ring: find the tension of the string when the angle B A C is 120°, the string and the ring both being supposed without weight.

2. Find the magnitude and direction of the resultant of two like parallel forces acting on a rigid body.

A lever without weight is 12 inches long, and from its extremities weights

of $5\frac{1}{2}$ and $6\frac{1}{2}$ pounds are suspended: where must the fulcrum be placed for equilibrium?

3. Show that the centre of gravity of a triangle coincides with the centre of gravity of three equal particles placed in its angular points.

A B C, D B C are two isosceles triangles on the same base B C, and with their vertices on opposite sides of the base; join A D, cutting B C in H: if K be the centre of gravity of the triangle A B C, L of B C D, and G of the whole figure A B C D, prove (1) $K L = \frac{1}{3} A D$, (2) $K G = H L$.

4. What is meant by the coefficient of friction?

When a body is placed upon a rough inclined plane and is just on the point of sliding down it, show that the coefficient of friction is the tangent of the angle of the inclination of the plane to the horizon.

If a force P act an angle of 30° on a particle whose weight is W placed on a rough horizontal plane, and is just on the point of moving it along the plane, show that $P = W(\sqrt{3} - 1)$ when the limiting angle of resistance is 45°.

5. If a pressure (P) act through a space (S), how are P and S expressed when it is said (P S) units of work are performed? In estimating a horse-power at 33000 is any other unit referred to besides those of weight and space?

In what time will an engine of 8 horse-power raise a ton of material from a depth of 170 fathoms?

6. In an isosceles roof show how the pressure on the tie-beam is determined.

If two rafters each 25 feet long are connected together by a tie-beam of 30 feet, and if a weight of one ton is suspended from the vertex, find the strain in pounds on the tie-beam, the weight of the rafters being neglected.

7. Find the greatest range on a horizontal of a projectile plane projected with a given velocity.

Find the greatest range for a velocity of 1,610 feet per second, gravity being taken at 32·2 feet.

8. A weight W is moved along a horizontal table by a weight P suspended over the edge of the table and attached to W by a string: find the accelerating force when the table is (1) smooth, (2) rough.

If P=20 lbs., W=100 lbs., and the coefficient of friction be ·15, find the space described in ten seconds.

9. Show how the specific gravity of a solid may be determined from weighing it *in vacuo* and in water, when it requires to be attached to another body to make it sink in water.

A body (A) weighs 8 ounces in a vacuum, and if another body (B) which weighs 6 ounces in water be attached to it, the united mass in water weighs $4\frac{1}{2}$ ounces, find the specific gravity of (A).

10. Explain the construction and action of a common barometer.

If a mercurial barometer stand at 30 inches and the specific gravity of mercury be 13·5, find the height at which water would stand in a water-barometer.

French.—M. Esquiros.

I.

Traduisez en anglais :—

Les cartouches manquaient, malgré la grande économie que nous en avions faite ; vingt mulets en étaient chargés, mais un adjudant, par lâcheté ou par sottise, les avait emmenés à une demi-lieue du champ de bataille. Cette circonstance aurait déterminé le colonel à une retraite définitive s'il n'avait attendu un bataillon du 67e, qui était posté à Ugin, et qu'il avait invité à venir se réunir à lui quand il entendrait le combat. La direction qu'il était forcé de suivre était telle que, si nous avions évacué la position, nous le livrions seul aux coups de l'ennemi.

Le colonel revenait de repousser une attaque qui avait pénétré par un gué inconnu ; il rencontra une cinquantaine de soldats qui sortaient de la ville où l'on combattait alors.

" Où allez-vous ? " leur dit-il ; " vous abandonnez vos camarades."

" Nous n'avons plus de cartouches, nous allons en chercher."

App. VI.
Royal Military College.

Dans ce moment deux ou trois cents tirailleurs ennemis, qui avaient passé on ne sait où, et qui s'étaient glissés dans un froment, firent feu à une courte distance sur le colonel et ses soldats.

" Chargez-les," dit le colonel.

" Mais nous n'avons pas de cartouches."

" C'est égal, chargez toujours."

Ils se précipitèrent sur les tirailleurs, sans pouvoir tirer un coup de fusil, et leur firent repasser la rivière. O puissance morale! tu es la reine des armées.—Général Bugeaud.

II.

Questions grammaticales.

1°. Ecrivez les temps primitifs de *venir, pleuvoir, neiger, fondre, dormir, rire, taire, couvrir, tenir, conquérir.*

2°. Quels sont les adverbes formés des adjectifs *traître, gentil, impuni, bref, long, mou, nouveau, fou?*

3°. Traduisez de deux manières *I remember it,* vous servant d'abord du verbe *se souvenir* et ensuite du verbe *se rappeler.*

4°. Indiquez la différence entre *un fameux brigand* et *un brigand fameux,* un *maigre dîner* et *un dîner maigre,* une *forte femme* et *une femme forte.*

5°. Traduisez en français: *There is nothing I hate more than deceit. It is the last examination which we have to pass.* Faites attention au mode des verbes et donnez vos raisons pour vous servir de l'indicatif ou du subjonctif.

III.

Ecrivez en français une courte description des environs de Sandhurst, le caractère du paysage en été et en hiver.

IV.

Traduisez en français :—

There was a fellow-soldier to Pigot, a North-of-Ireland man, named Stewart, but jocularly called the *boy,* because of his youth, being only nineteen, and of his gigantic stature and strength. He had fought bravely and displayed great intelligence beyond the river, and was one of the last men who came down to the bridge, but he would not pass. Turning round, he regarded the French with a grim look, and spoke aloud as follows:—" So! this is the end of our boasting. This is our first battle, and we retreat! The boy Stewart will not live to hear that said." Then striding forward in his giant might he fell furiously on the nearest enemies with the bayonet, refused the quarter they seemed desirous of granting, and died fighting in the midst of them!—William Napier.

German.—Professor Max Müller.

I.

Translate into English:—

Iſt die Schlacht gewonnen oder ſind die Mauern erſtiegen, ſo ſieht man Frauen auf Maulthieren oder Kameelen entfliehen, oder kniend und händeringend um Gnade flehen. Die Sieger morden und plündern; ſie bringen die Köpfe der Erſchlagenen ihren Befehlshabern, deren Schreiber die Zahl notiren. Kameele, Schaafe und Ziegen werden fortgetrieben, die Gefangenen werden gefeſſelt und vor den König geführt, welcher den Thron beſtiegen hat. Hier erſcheinen ſie von den Siegern mit Schlägen vorwärts getrieben, bald mit ſchweren Eiſen an Händen und Füßen gefeſſelt, bald mit gebundenen Händen, bald an Stricken geführt, welche durch die durchbohrten Lippen und Naſen gezogen ſind. Einem gefangenen Fürſten ſetzt der König wohl den Fuß auf den Nacken, einen andern blendet er mit der Lanze, andere werden auf Pfähle geſpießt. Dann folgt die ſiegreiche Heimkehr; Muſik und Krieger ziehen dem Wagen des Königs voraus, vor welchem außerdem zuweilen die Köpfe der Erſchlagenen hergetragen werden.

Alles dieß können wir jetzt auf den Denkmälern sehen, welche aus den Ruinen von Babylon und Ninive nach Europa gebracht worden sind. Für die Kenntniß des Privatlebens der Assyrer sind die bis jetzt entdeckten Monumente weniger ergiebig; es fehlt hier das reiche Material, welches in Ägypten die Gräber des Volkes neben den Prachtbauten der Könige hergeben.

II.

Translate into German :—

The Duke of Berwick, who was a French marshal, did not forget that he was an Englishman. When he commanded in the Succession War in Spain, one of his Spanish officers surprised an English regiment, and killed or took all the men belonging to it. When the news of this exploit was brought to the Duke, he turned pale; and when the colours of the beaten regiment were brought before him, he would not look at them.

The Duke of Berwick had served in twenty-nine campaigns, in fifteen of which he had commanded armies. Yet, as a general officer, he had witnessed only six battles; and he had commanded in chief at only one, namely, Almanza. It is surprising, says his biographer, to find so few battles in so many campaigns; but he himself accounts for this circumstance by expressing his opinion that a general ought never to give battle if it can possibly be avoided, because by skilful dispositions and able manœuvres greater results may be obtained than by hazarding a battle.

III.

Essay.

Those who are able may write an essay in German on the advantages of the electric telegraph.

IV.

Grammatical Questions.

1. Decline Der hohe Thurm.
2. Give the meaning and gender of Hochzeit, Faß, Licht, Dorf, Weg, Tisch, Stuhl.
3. Give the first person singular of the perfect of Wollen, Fallen, Sich besinnen, Schießen, Trinken.
4. Translate "We have been allowed to return," employing the verb Dürfen.
5. What is the difference between Was and Welches? Illustrate it by examples.

Experimental Sciences.—F. A. Abel, F.R.S.

1. Demonstrate experimentally how sound is produced; give some account of the manner in which sound is propagated, and state what you know regarding the velocity of sound under different conditions.
2. Describe what you understand by the reflection of sound, and give some illustration of its operation and effect.
3. What are the conditions which regulate the intensity of sound? What means could you adopt for increasing the intensity of a sound, such as that produced from a musical instrument?
4. Some account is required of the general physical properties of air, of the composition of the atmosphere, and of the properties and functions of its several constituents.
5. Describe and explain the production of a Toricellian vacuum, and give an account of the construction and uses of a mercurial barometer.
6. Explain the construction and action of some form of air-pump, including an account of the air-pump gauge.
7. It is desired to compare the rates of diffusion of two gases; what is the mode of proceeding? By what law is the rate of diffusion of gases governed?

8. What are the several points to be considered in determining upon the material to be employed in the construction of an air-balloon, the nature of the gas to be used, and the dimensions of the balloon?

9. Demonstrate experimentally the nature of magnetic attraction and repulsion, and of magnetic induction or influence.

10. What is the difference between a magnetic substance and a magnet? Explain the meaning of the following terms:—medial line, coercive force, magnetic axis, magnetic saturation.

11. How would you proceed to construct a magnetic battery? How does the armature of a magnet act in preserving its power?

12. A thin strip of steel, tapering towards the extremities, is to be magnetized either by terrestrial agency, or by means of a voltaic current. Describe the mode of proceeding in either instance, and the precise nature of the result obtained; and state how you would apply the piece of magnetized steel for determining the magnetic declination, and for ascertaining the magnetic inclination, in a particular locality.

Natural Sciences.—Professor J. Morris, F.G.S.

1. Give the *subdivisions* of the Mesozoic or Secondary rocks, and mention the chief economical substances obtained from them.

2. What is understood by rocks of chemical origin, and rocks of mechanical origin? Give examples of rocks belonging to each division.

3. Enumerate the chief *inorganic* agencies now modifying the surface of the earth. and briefly describe the effects produced by any one of them.

4. Draw a section across England and Wales showing the general succession of the stratified rocks.

5. Mention any districts in Great Britain in which Igneous rocks occur, and state in what manner they have influenced the physical features of the district in which they are found.

6. What are strata in geology, and of what materials are they composed?

7. Define the terms *dip* and *strike* of strata; give the general dip and strike of the secondary rocks of England.

8. Upon what evidence is it inferred that the stratified rocks have been successively formed?

9. Give a general sketch of the geological structure and physical features of the Bagshot district.

10. Illustrate by diagrams, or define the terms, Outlier, Inlier, Overlap, reversed and ordinary faults, and explain the conditions under which they have been respectively formed.

11. Give the *geological position* of the carboniferous limestone, and mention some of the most characteristic fossils found in it.

12. State the various modes of occurrence of the Igneous rocks.

13. Mention any facts respecting the *Wealden area*, either as connected with its physical features or the geological structure.

14. Mention some of the conditions under which *Silica* is found in nature.

15. Name some minerals which are largely composed of *Lime*, stating their chemical composition, chief physical characters, and how they can readily be distinguished from each other.

16. What is the evidence that recent movements of the earth's surface have taken place?

Appendix VII.

Horse Guards, 1st May 1868.

Regulations for the Admission of Gentlemen Cadets to the Royal Military Academy, Woolwich.

N.B.—All candidates for Commissions in the Royal Artillery and Royal Engineers are required to go through a course of instruction at the Royal Military Academy.

I. Competitive Examinations for admission are held in London twice a year, in January and July. They are conducted by examiners appointed for the

purpose, in the presence and under the superintendence of the Council of Military Education.

The candidates must be between 16 and 19 years of age.

II. The admissions will be determined by the result of the examination, the subjects of which will be as follows, viz. :—

			Marks.
1. Mathematics	Pure	Section I. Arithmetic, Algebra, Euclid, Plane Trigonometry - - 2,000	3,500
		Section II. Spherical Trigonometry, Elements of Co-ordinate Geometry, and of the Differential and Integral Calculus* - - - - - 500	
	Mixed :—Statics, Dynamics, and Hydrostatics - - - 1,000		
2. English Language and Composition - - -			1,000
3. History of England, its Dependencies and Colonies -			1,000
4. Geography (Modern) - - - - -			1,000
5. Classics	Latin Language - - - -		1,500
	Greek ditto - - - -		1,500
6. French Language - - - - -			1,000
7. German ditto - - - - -			1,000
8. Hindustani ditto - - - - -			1,000

The examination in French, German, and Hindustani will include writing from dictation.

9. Experimental Sciences, *i. e.*, Chemistry, Heat, Electricity, including Magnetism - - - - - -		1,000
10. Natural Sciences, *i. e.*, Mineralogy and Geology -		1,000
11. Drawing	Free-hand Drawing of Machinery, Architectural, Topographical, Landscape, or Figure Subjects - - - -	1,000

Every candidate must qualify in Geometrical Drawing; *i.e.* Drawing in Ink, with accuracy, neatness, and to scale, the several problems of Euclid. The standard of qualification in this subject is 100 marks, which must be gained out of a maximum of 300 nominally assigned to it. But the marks so gained will not count towards the general aggregate.

III. No candidate will be allowed to be examined in more than five subjects, of which one must be Mathematics, and no one who does not obtain at least 700 marks in Section I. of Pure Mathematics, will be eligible for an appointment.

From the other subjects of examination, to which marks are assigned as above, each candidate may select any, not exceeding four in number, in which he desires to be examined. The rules for counting marks in such subjects are as follows :—

In all subjects carrying marks, except the 1st section of Mathematics, in which 700 marks are required, one sixth of the number allotted to each must be gained before they can be allowed to count.

In Classics, the subject is divided into two sections as above, either or both of which the candidate may take up as one subject; but he will not be allowed to count the marks gained in either section unless they amount to one sixth of the number allotted to it.

In either *French, German,* or *Hindustani* every candidate will be required to obtain for qualification one-sixth of the maximum of marks, whether he takes it up as a subject in which he desires to compete or not.

It should be understood that, although only a small qualifying test has been imposed in respect to modern languages, a knowledge of them on admission will contribute greatly to a candidate's future success at the Royal Military Academy.

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* See Syllabus annexed.

IV. The candidates are allowed to answer as many questions as the time allotted to the subject will permit.

V. No candidate will be admitted unless he obtain an aggregate of at least 2,500 marks.

VI. The successful candidates will remain under instruction for about two years and a half, or until they are sufficiently advanced in scientific knowledge to pass a satisfactory examination, and they will then be qualified to receive commissions in the Royal Artillery or Royal Engineers. If, however, they should be found unable to qualify themselves within three* years in their professional studies, or to acquire a sufficient proficiency in military exercises, or if at any time, by failure at the half-yearly examinations, it should appear improbable that they will ultimately succeed in qualifying for a commission, they will be removed. Further, every cadet will be liable to be removed temporarily or permanently on the commission of any of those offences to which such penalty is awarded by the regulations of the Royal Military Academy.

VII. Each cadet on joining will be required to pay a sum of 25*l.* to cover the expense of uniform, books, &c., and to bring with him the articles of clothing of which he will receive notice, and which must afterwards be kept up at his own expense. He will also be required to pay a contribution of 62*l.* 10*s.*, payable in advance, for each half year of the time during which he remains under instruction; and a deposit of 5*l.* into the hands of the Paymaster on account, for contingent expenses, which latter sum he will be required to make up on returning to the Royal Military Academy after each vacation, to cover any unavoidable expense that may be incurred on his account during the ensuing half-year.

The annual contributions, however, for sons and orphans of naval and military officers will be regulated at the following rates, as heretofore:—

	£
For sons of admirals and of generals having regiments	80
For sons of generals without regiments	70
For sons of captains and commanders of the Navy, and of colonels and regimental field officers of the Army	60
For sons of all officers of the Army and Navy under the above ranks	40
For sons of officers of the Army and Navy who have died in the service, and whose families are proved to be left in pecuniary distress	20

The sons of general officers who are paid only on their commissions as field officers will pay the same contribution as the sons of field officers.

Officers who have sold their commissions are, in this classification, reckoned as private gentlemen.

The cases of officers who have retired voluntarily upon half-pay previous to having served twenty-five years on full pay will be specially considered.

Officers who retire on half-pay after twenty-five years service on full pay will be entitled to be classified for payment with the rank they last served in.

The sons of officers of the Civil Departments of the Army and Navy, of officers of the Permanent Militia Staff, and of adjutants of the Volunteer Force, are admissible to the Academy upon the same terms as those prescribed for naval and military officers.

The sons of Indian naval and military officers will be admitted on the same terms as the sons of officers of the Queen's service.

	£
The sons of professors at the Staff and Royal Military Colleges, at the Royal Military Academy, and at the Royal Military College, Addiscombe	60
The sons of masters at the above institutions	40

If a cadet be absent a whole term in consequence of sickness or rustication, a payment of 10*l.* will be required for the privilege of his name being kept on the rolls of the establishment, and for a vacancy being guaranteed at the commencement of the next term.

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* To be counted from the commencement of the term in which a cadet joins, and no extension of this period will be granted on account of absence from the Academy from any cause excepting illness. Cases of protracted absence on account of illness will be specially considered on the Report of the Medical Officer of the Academy.

If a cadet be absent from sickness during a portion of the term, his pay will continue to be issued and credited to his account; but no refund of the contribution will be permitted.

If rusticated during a term, the daily pay will cease from the date on which the cadet is sent away, and the contribution made for the half-year will be forfeited.

In the case of a cadet of the orphan class, whose annual contribution is only 20*l.*, the amount to be paid when absence extends over a whole term is to be determined by the Secretary of State.

VIII. Any gentleman who wishes to present himself at one of the half-yearly examinations must send in his name to the Military Secretary at the Horse Guards one month before the time of examination, forwarding with his application to be noted the following papers:—

1st. An extract from the register of his baptism,* or, in default of that, a declaration before a magistrate, taken by one of his parents, giving his exact age.

2d. A certificate of good moral character, signed by a clergyman of the parish to which he belongs, and by the tutor or head of the school or college at which he has received his education for at least the two preceding years, or such other proof of good moral character as will be satisfactory to the Commander-in-Chief.

3d. A statement of the subjects of examination in which (in addition to Mathematics) he may desire to be examined.

A candidate who has been examined before, when he applies for leave to present himself again, will only be required to forward the list of subjects he selects, and a certificate from his tutor or the head of his school, &c., for the interval between the two examinations.

IX. The candidates will be inspected by Military Surgeons on the first day of the examination, in order that it may be ascertained that they are free from any bodily defects or ailments calculated to interfere with the performance of military duties.

Extreme short sight, or any serious defect of vision, is regarded as a disqualification.

The responsible parent or guardian of every successful candidate, and the candidate himself, before he can be admitted as a cadet, will be required to sign respectively the following declarations:—

Declaration by Cadet.

I do hereby declare that I have attentively considered Article VI. above quoted, of the regulations for admission to the Royal Military Academy, and I consent to abide by the same in every particular, as well as to observe and follow all such orders and directions as I shall from time to time receive from the Lieutenant Governor or other officers or authorities of the Royal Military Academy. And I further hold myself bound to conform in every respect to Her Majesty's regulations, and to the rules and discipline of the service.

*Signature*_____

Declaration by the Parent or Guardian.

I hereby declare that I consent to the admission of my (son or ward) to the Royal Military Academy on the foregoing conditions.

*Signature*_____

(Signed) W. F. Forster,
Military Secretary.

* Note.—When the register of baptism does not contain the date of birth it should be accompanied by a memorandum, signed by one of his parents or guardians, stating the day on which the candidate was born.

App. VII.
Royal Military College.

Syllabus of Examination in the Differential and Integral Calculus.

Differential Calculus.

The meaning of Differentiation.
The Differentiation of Elementary Functions of one independent variable.
The theorems of Taylor and Maclaurin, with their applications.
The theory of Maxima and Minima, with its applications.
The equations to the Tangents, Normals, and Asymptotes of Plane Curves.
The curvature of Plane Curves and their radii of curvature and evolutes.
The Differential Co-efficients of the Arcs and Areas of Plane Curves to rectangular and polar Co-ordinates, and of the surfaces and volumes of solids of revolution.

Integral Calculus.

The meaning of Integration.
The Integration of Elementary Functions.
The Integration of Rational Fractions.
The determination of the lengths and areas of Plane Curves, and of the surfaces and volumes of solids of revolution.

Horse Guards, 5th September 1867.

Regulations of the Royal Military College at Sandhurst relative to the Admission, Education, and Military Training of Gentlemen Cadets.

Her Majesty having been pleased to direct that the Regulations of the Royal Military College at Sandhurst relative to the admission, education, and military training of gentlemen cadets should be revised and corrected, the following are to be substituted for those now in force.

Admission.

1. Candidates for vacancies at the Royal Military College, Sandhurst, will be required to undergo an examination under the superintendence of the Council of Military Education. Examinations for this purpose will be held in June and December of each year at the Royal Hospital, Chelsea.

2. Twenty Queen's cadets will be borne on the establishment, being the sons of officers who have fallen in action, or have died of wounds received in action, or of diseases contracted on service abroad; and who have left their families in reduced circumstances. Fifteen will be sons of officers of the Army, and five will be sons of officers of the Royal Navy and Royal Marines.*

There will be, in addition, twenty Indian cadetships, for nomination to which the sons of persons will be selected who have served in India in the military or civil services of Her Majesty or of the East India Company.

3. Candidates, whether for the Infantry or the Cavalry, must be between 16 and 19 years of age at the commencement of the term immediately succeeding their admission examination.

Terms commence on the 1st February and 1st August.

Students from the Universities will be admissible at the ages stated in Art. 11. of these Regulations.

4. Every candidate for admission must apply (if under age through his parent or guardian) to the Commander-in-Chief, to have his name entered on the list of candidates.

5. He must transmit, with his application, the following documents, viz.:—
(*a.*) An extract from the register of his baptism,† or in default of that, a

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* These limited numbers include the cadets who have entered the College, and those candidates who have been granted the educational allowance referred to in article 47.

† Note.—When the register of baptism does not contain the date of birth it should be accompanied by a memorandum, signed by one of his parents or guardians, stating the day on which the candidate was born.

declaration before a magistrate, taken by one of his parents, giving his exact age. (*b.*) A certificate from the minister of the church or denomination to which he belongs, of his having been duly instructed in the principles of the Christian religion.

His name having been placed upon the list of candidates, it will be open to him to offer himself at any of the half-yearly examinations which may occur while he is within the prescribed limits of age. If unsuccessful in obtaining one of the vacancies at the college, he will be allowed to present himself at any subsequent examination until he has exceeded the maximum age. After he has exceeded the maximum age, he can only be admitted into the Army on obtaining a direct commission by purchase, in the usual manner, after passing a qualifying examination.

7. He will be examined by a medical officer, who will ascertain whether he is free from all bodily and organic defects, and whether, as far as regards physical constitution, he is in every point of view fit for military service.

8. The following will be the subjects of examination, but no candidate will be allowed to be examined in more than *five* of these subjects :—

	Marks.
Classics { Latin, 2,000 / Greek, 1,600 }	3,600
Mathematics	3,600
English Language	1,200
Modern Languages, each	1,200
History with Geography	1,200
Natural Sciences (*i.e.* Mineralogy and Geology)	1,200
Experimental Sciences (Chemistry, Heat, and Electricity, including Magnetism)	1,200
{ Geometrical Drawing	600
{ Freehand Drawing	600

Of the above subjects, the elementary portion of Mathematics and the English language are obligatory on each candidate.

The following elementary branches will be included in the obligatory section of Mathematics, viz. :—

In Arithmetic ; vulgar and decimal fractions, proportion, extraction of the square root, and interest.

In Algebra ; fractions, simple equations, and questions producing them.

In Euclid ; the first three books.

To these elementary branches 1,200 marks (out of the whole 3,600 for Mathematics) will be allotted, and it will be necessary for qualification that at least 400 be obtained, of which 200 must be obtained in Arithmetic.

In the English language 400 marks will be allotted to correct and legible writing from dictation, and to composition ; and of these it will be necessary for qualification that 200 be obtained.

Out of the remaining subjects the candidate may select any three.

No candidate will be allowed to count the marks gained in any one of the three voluntary subjects, unless amounting to one sixth of the whole number of marks allotted to that subject ; and for qualification, he will be required to obtain on his five subjects a total of 1,500 marks.

No marks will be allowed to count in any subject left optional to the candidate, unless he gain at least one sixth of the whole number allotted to that subject.

9. Every candidate will be required to forward to the Military Secretary, Horse Guards, one month before the examination, a statement of the subjects he desires to take up, as well as a certificate from the master or tutor under whom he has been educated, of his general moral conduct for at least the two preceding years. If a candidate has failed in a previous examination he will only be required to forward a list of the subjects he selects, and a certificate of conduct between the two examinations. These documents are under no circumstances to be transmitted before the date above specified.

10. After the examination, the candidates will be reported to the Commander-in-Chief in the order of their merit, and will be appointed accordingly as far as vacancies will allow.

11. Candidates who have passed the examinations called "responsions" and "moderations" at the University of Oxford, or those called "previous

examinations" at the Universities of Cambridge and Dublin, or the matriculation examination of the University of London; or any one of the three examinations required for the degree of M.A. at the Universities of St. Andrews and Glasgow; or the "class examination of the second year" (Curriculum of Arts) at the University of Aberdeen; or the "preliminary examination" at the University of Edinburgh; or the "first University examination" of Queen's University, Ireland, will be considered as qualified for admission to the Royal Military College, without further examination.

Candidates from the Universities must not be more than 21 years of age for the Infantry, nor more than 23 years for the Cavalry. They will be required to send to the Military Secretary, Horse Guards, two months before the commencement of the term at which they desire to enter, certificates from the responsible authorities of their College of general moral conduct during residence at the University, and of having passed the above-mentioned examinations, together with the certificate of age, as required by Clause 5.

Should the number of general candidates be considerably in excess of the number of vacancies at the College, a suitable portion of those vacancies will be offered to the University and to the competing candidates respectively.

12. Candidates for admission as Queen's Cadets must apply for a nomination to the Commander-in-Chief, if the sons of officers in the Army; or to the First Lord of the Admiralty, if the sons of officers in the Royal Navy or Royal Marines. The above nominations will be made by the Commander-in-Chief or First Lord of the Admiralty, with the concurrence of the Secretary of State for War. The Secretary of State for India in Council will nominate to cadetships for the Indian Services.

Provision for Necessaries, Books, &c.

13. Every gentleman cadet will receive from the Military Secretary a list of the articles of clothing, books, and instruments with which he must provide himself before joining the College, and which he will be required to keep complete during his residence.

Any other books, instruments, or drawing implements that he may subsequently require for the prosecution of his studies, will be provided at the College, and charged to his account.

Payments, Contributions, &c.

14. The amount of contribution for education, board, washing, and medical attendance, on account of each cadet, is as follows:—

	Per annum.
a. For sons of private gentlemen	£100
b. For sons of admirals, and general officers having regiments or receiving Indian colonels' allowances	80
c. For sons of general officers	70
d. For sons of captains and commanders of the Royal Navy, and field officers of the Army having substantive rank	50
e. For sons of all officers of the Royal Navy and Army under the above rank	40
f. For sons of officers of the Royal Navy and Army who have died in the service, and whose families are proved to be left in pecuniary distress	20
g. Queen's cadets and cadets nominated by the Secretary of State for India in Council	Free.

15. General officers on the Non-effective List will pay according to their last substantive rank.

Officers who have sold their Commissions are, in this classification, reckoned as private gentlemen.

The cases of officers who have retired voluntarily upon half-pay previous to having served twenty-five years on full pay, will be specially considered.

Officers who retire on half-pay after twenty-five years service on full pay, will be entitled to be classified for payment with the rank in which they last served.

16. The orphans of officers whose claims do not come under classes *f* and *g*, must contribute according to the substantive rank last held by their fathers.

17. For sons of officers who have retired on *full* pay, the payments will be according to the substantive rank last held by their fathers.

18. The sons of officers of Civil Departments having relative rank with officers of the Army and Navy, of the Permanent Militia Staff, and of adjutants of the Volunteer Force, are admissible to the College on the same terms as those prescribed for the sons of officers of the Army and Navy of corresponding rank.

19. The sons of Indian naval and military officers not specially nominated by the Secretary of State for India will be admitted on the same terms as the sons of officers of the Queen's service.

20. Contributions for the sons of professors at the Staff and Cadet Colleges, at the Royal Military Academy, and at the late Indian College, Addiscombe, will be - - - - - £50
For the sons of masters at the above institutions - - - - 40

21. Any change which may take place by promotion or retirement in the rank of the father of a cadet must be immediately notified to the Military Secretary, in order that the contribution paid to the College on account of such cadet may be regulated accordingly.

22. *Previously* to the admission of a cadet (not a Queen's cadet) he, or if a minor his parent or guardian, will be required to make the following payments, viz. :—

1. His contribution for half a year.
2. The sum of 15*l.* for the provision of his first equipment of uniform clothing.
3. The sum of 10*s.* for the support of the Company Reading Rooms of the gentlemen cadets.
4. A deposit of 15*l.*, on account, for contingent expenses.

23. The above sums are to be paid to the Paymaster of the Royal Military College at Sandhurst.

24. For each succeeding half-year, the regulated contribution is in like manner to be paid in advance, to the Paymaster of the College, to whom must also be remitted the sum of 5*l.* for the further provision of uniform clothing, and such sum as may be required to make up the contingent deposit to 15*l.* The amount of this balance will be shown by an account rendered at the end of every half-year, of the sums paid out of the deposit, during the past term.

25. No cadet on whose behalf these regulations in regard to payments have not been complied with will be received at the College.

26. No refund of contribution will be made for any portion of the half-year in which the cadet may be removed from the establishment, without the special sanction of the Secretary of State for War.

27. No payments will be required from Queen's or Indian cadets.

28. If a cadet be rusticated during a term, his contribution for the half-year will be forfeited.

22. If absent a whole term in consequence of rustication or sickness, a contribution of 10*l.* will be required for the privilege of his name being kept on the rolls of the establishment, and for a vacancy being guaranteed at the commencement of the next term.

30. If absent from sickness during any portion of a term, a refund of that portion applicable to subsistence will be permitted.

31. In the cases of cadets of the orphan class, whose annual contribution is only 20*l.*, the amount to be paid when the absence extends over a whole term, will be submitted to and determined by the Secretary of State.

32. Every gentleman cadet will be supplied with a weekly allowance of pocket money, at the discretion of the Commandant of the College; but this allowance will not exceed four shillings and sixpence a week for a gentleman cadet who is a responsible under officer, four shillings a week for a gentleman cadet who is an under officer, three shillings and sixpence a week for a gentleman cadet who is a corporal, and two shillings and sixpence a week for all other gentleman cadets. The expense of this allowance will be defrayed out of the amount deposited for the purpose of meeting contingent expenses, and in the case of Queen's or Indian cadets it wil lbe borne by the public.

Discipline.

33. All gentlemen cadets are subject to such rules and regulations as are or may be from time to time established for the maintenance of good order and discipline.

34. Every gentleman cadet will be liable to be removed from the College at any time, should his conduct be such as to render it obvious that his remaining longer would be either hurtful to the Institution or unprofitable to himself.

35. Any gentleman cadet whose conduct may be deemed to merit such punishment will be rusticated or removed from the College by the Governor, and a full report of the circumstance will immediately be made by the Governor to the Commander-in-Chief.

The removal of a cadet entails no further consequence than that of debarring him from examination for a direct commission during the time then remaining for the completion of his ordinary period of residence at the College.

Cases of expulsion will, as heretofore, be decided by the Commander-in-Chief.

36. Gentlemen cadets are strictly prohibited from contracting debts with any publican or tradesman in the vicinity of the College.

37. No perquisites or presents of any kind are to be received by any person belonging to the College from either the gentlemen cadets or their friends.

38. Gentlemen cadets will not be allowed to remain at the College during the vacations, without the special sanction of the Secretary of State for War, on satisfactory proof being shown that they have no friends in the United Kingdom to whom they could go. Payment of 1*l.* 1*s.* a week will be required in such cases from those who are not Queen's cadets.

Termination of the Course, and Removal from the College.

39. The course of study is calculated for a residence of three terms, or eighteen months, reckoned from the commencement of the term in which a gentleman cadet may join. It is open, however, for any cadet who at the end of his first term shall have proved himself qualified for promotion at once to the third term classes, to compete for a commission without purchase, or to be examined for a commission by purchase, at the end of his second term; but no fourth term will be allowed on any plea but that of long continued sickness, in which case special application must be made to the Commander-in-Chief, accompanied by an opinion from the surgeon of the College.

Gentleman cadets allowed a fourth term will not be permitted to compete for commissions without purchase.

40. Examinations for commissions will be held periodically. The number of commissions to be given without purchase will be announced previously to the examination. These will be competed for and awarded to the candidates who are first in order of merit.

41. Candidates who have not succeeded in obtaining a place amongst those to whom commissions without purchase can be awarded, but who have obtained the minimum number of marks required for qualification, will be considered to have prior claims to all other candidates for commissions by purchase.

42. Queen's and Indian cadets will receive commissions without purchase on passing the qualifying examination. The names of those who distinguish themselves equally with competitors for commissions without purchase will be published in the same lists with the latter.

43. In every case a certificate of conduct and proficiency in military and athletic exercises will be required from the Governor of the College before a cadet can be examined for his commission.

44. Any gentleman cadet desirous of entering the Royal Artillery or Royal Engineers will be permitted, if otherwise eligible, to offer himself as a candidate at any of the competitive examinations for admission into the Royal Military Academy at Woolwich; and his position at the Royal Military College will not be affected by his failure at such examination.

45. No gentleman cadet will be allowed to present himself at a direct commission examination during his residence at the Royal Military College.

46. No gentleman cadet is to be removed from the College without the permission of the Commander-in-Chief, obtained through the Governor of the

College. And when a parent or guardian intends to withdraw a cadet, or, if of age, the gentleman cadet intends to leave the College, at the end of a term, at least six weeks' notice of his intention is to be given to the Governor. In default of such notice a quarter's subscription must be paid.

Miscellaneous.

47. The establishment for Queen's cadets having been sanctioned by Parliament when the age of admission to the Royal Military College was from 13 to 15 years, it has been decided that in any case when the services of the father and the circumstances of his family are such as to constitute a claim, an addition of not more than 40*l.* a year to the "Compassionate Allowance" may, at the discretion of the Secretary of State for War, be allowed to a candidate who is over 13, to enable him to complete his preparatory education, as he is ineligible for immediate admission into the College in consequence of the minimum age of admission having been raised to 16.*

48. It is desirable that every candidate who is under 21 years of age should, at his admission, be accompanied by his parent, guardian, or some other responsible person, to satisfy the requirements of the College on his behalf.

49. The responsible parent or guardian of every successful candidate, and the candidate himself, before he can be admittted as a cadet, will be required to sign respectively the following declarations :—

Declaration by Cadet.

"I _____ do hereby declare that I have attentively considered the regulations for admission to the Royal Military College, and I consent to abide by the same in every particular, as well as to observe and follow all such orders and directions as I shall from time to time receive from the governor, the commandant, or other officers or authorities of the Royal Military College. And I further hold myself bound to conform, in every respect, to Her Majesty's regulations, and to the rules and discipline of the service."

(Signature) _____

Declaration by the Parent or Guardian.

"I hereby declare that I consent to the admission of my (son or ward) to the Royal Military College, on the foregoing conditions."

(Signature) _____

Subjects of the Final Examination.

	Max.	Min. allowed to count.	Min. required for Qualification.
50. Field Fortification and elements of Permanent Fortification including preparatory course of Practical Geometry	1,800	450	1,200
Military Drawing and Surveying	1,800	450	
Military History and Geography	1,800	450	
Mathematics:—	Max.	Min. allowed to count.	
1*st Section.*—Arithmetic, Algebra up to simple equations, Euclid, 4 books, use of Logarithmic Tables, Elementary Problems in Heights and Distances, and Mensuration	2,200	300	
2*d Section.*—Euclid, books V., VI,, and XI. (Propositions 1–20), higher Algebra, Plane Trigonometry, and Mensuration	1,200		
3*d Section.*—Practical Mechanics and Hydrostatics	1,200		
Higher Fortification	600		
French	1,200	300	
German	1,200	300	
Chemistry	1,200	300	
Geology	1,200	300	
Freehand Drawing	600	150	

* In order to establish a claim to the allowance, a certificate must accompany the application from the candidate's tutor that will enable the authorities to come to a reasonable conclusion that his education will be sufficiently advanced on his attaining the proper age to pass the examination for admission to the College.

App. VII.
Direct Commissions.

In order to qualify for a Commission, every gentleman cadet will be required to obtain 1,950 marks in the obligatory section of Fortification, Military Drawing and Surveying, Military History, the first section of Mathematics, and one foreign language; of which number of marks 1,200 must be gained in the three *Military* subjects, as shown on the preceding page.

W. F. Forster,
Military Secretary.

DIRECT COMMISSIONS.

Horse Guards, 1*st January* 1867,

MEMORANDUM.

The following regulations, in regard to the examination of gentlemen preparator to their receiving commissions in the Army, will take effect from this date, in lieu of those issued on the 1*st October* 1866, *and previous dates.*

I. The examinations of candidates for direct commissions will be held in London at such periods as the exigencies of the service may require, and be conducted under the direction of the Council of Military Education by examiners appointed for the purpose. The number of candidates summoned to attend each examination will be limited to the requirements of the service.

II. The age of candidates examined for direct appointments will be, until further notice, from 17 to 20 years for the infantry, from 17 to 22 years for the cavalry, and from 17 to 26 years for colonial corps.*

III. The candidate will be examined by a medical board, to ascertain that he is in every point of view, as regards his physical constitution, fit for military service.

He will be required to produce the following certificates, which must be forwarded to the Council of Military Education, 13, Great George Street, S.W. as soon as possible after the receipt of the Military Secretary's order to attend for examination.

a. A certificate of baptism or other satisfactory proof of his age.

b. A certificate from a minister of the church or of the denomination to which he belongs, that he has been duly instructed in the principles of religion.

c. A certificate of good moral character, signed by a clergyman of the parish to which he belongs, or by the tutor or head of the school or college at which he has received his education for at least the two preceding years; or such other proof of good moral character as will be satisfactory to the Commander-in-Chief.

d. A statement of the subjects in which he wishes to be examined.

IV. The following will be the subjects of examination, but no candidate will be allowed to be examined in more than *five* of these subjects.

	Marks.
Classics { Latin	2,000
Classics { Greek	1,600
Mathematics, pure and mixed	3,600
English Language	1,200
†Modern languages (not including provincial dialects), each	1,200
History, ancient and modern, with Geography	1,200
Natural Sciences, *i.e.*, Mineralogy and Geology	1,200
Experimental sciences, *i.e.* Chemistry, Heat, Electricity, including Magnetism	1,200
Drawing	600

* The candidates already on the Commander-in-Chief's list may be examined between the limits of age fixed by the regulations which were in force at the time their names were recorded.

† Each modern language is reckoned as one subject.

V. O the foregoing subjects, the elementary branches of mathematics and the English language, to the extent stated in the following paragraphs, will be considered obligatory:—

1. In Mathematics, 1,200 marks will be given to the following obligatory portions, viz., arithmetic, including vulgar and decimal fractions, proportion, extraction of the square root, and simple interest.

Algebra, including fractions, simple equations, and questions producing them: Euclid, the first three books.

Of the 1,200 marks allotted to the foregoing portions of mathematics, 400 will be required for qualification, and of these at least 200 must be obtained in arithmetic.

2. In the English language, the candidate will be required to write correctly and in a good legible hand from dictation, and to compose grammatically. He will be required to obtain at least 200 marks in this subject.

3. Out of the remaining subjects the candidate may select any three.

4. No candidate will be allowed to count the marks gained in any one of the three voluntary subjects, unless amounting to one sixth of the whole number of marks allotted to that subject; and for qualification, he will be required to obtain on his five subjects a total of 1,500 marks.

5. In the examination in classics, passages will be given for translation from the books usually read at schools; grammatical questions will be set, and English passages also given for translation into the Latin and Greek languages.

VI. The result of each examination will be reported to the Commander-in-Chief, and the names of any candidates who distinguish themselves will be specially brought to his notice.

VII. An unsuccessful candidate will not be debarred from applying to the Commander-in-Chief for permission to attend a future examination. No candidate, however, will be allowed more than three trials.

Should a candidate obtain only between 700 and 1,200 marks, he will not be allowed to present himself for re-examination for at least six months. If he obtains less than 700 marks, a period of at least twelve months must elapse before he can be allowed to present himself again.

In all cases permission to be re-examined must depend upon the number of applicants on the list.

In subsequent examinations no credit will be given for the marks gained by a candidate on former occasions.

In the event of a candidate not appearing for examination at the time appointed, such candidate will not be permitted to attend on the next occasion, and he will render himself liable to have his name either erased entirely, or placed at the bottom of the list of those noted for examination.

VIII. A student at either of the Universities of Oxford, Cambridge, Dublin, London, St. Andrews, Glasgow, Aberdeen, Edinburgh, or Queen's University, Ireland, who shall have passed the examination necessary for taking a degree in arts, is qualified for a commission by purchase without being required to pass the foregoing examination, provided he is within the limits of 17 and 23 years of age if for the infantry, 17 and 25 years if for the cavalry, and of 17 and 28 years for colonial corps, and can produce the certificates marked (*a*), (*b*), and (*c*).

Such candidate must furnish a certificate of having graduated, or of having passed the examinations, signed by the Registrar of the University, and showing the date on which the examination took place.

On his application being approved, the candidate will receive an order to be medically examined as to his physical fitness for the service.

The candidate will address his application, accompanied by the necessary certificates, to the Military Secretary, Horse Guards.

W. F. Forster,
Military Secretary.

LONDON:

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THE REPORT

OF THE

PRESIDENT

OF

QUEEN'S COLLEGE, BELFAST,

FOR THE

YEAR ENDING JUNE 10, 1868.

Presented to both Houses of Parliament by Command of Her Majesty.

DUBLIN:
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1868.

CONTENTS.

Page

REPORT, ... iii

APPENDIX—

1. Queen's College, Belfast, and Queen's University, ... 11
2. Return of the Number of Students attending each Class in the Queen's College, Belfast, in each Year, ... 14
3. Return of the Amount of Fees received by each Professor in the Queen's College, Belfast, in each Year, . . . 16,17
4. Account of the Expenditure of one Year's Additional Grant to the Queen's College, Belfast, ending 31st March, 1867, . 16,17
5. General Class Examinations, Queen's College, Belfast, 1866–67, 1867-68, ... 19
6. Return of the Number of Lectures delivered by each Professor in the Queen's College, Belfast, in each Year, ... 20

October Examinations of Queen's College, Belfast, 1868, . 22

Hours of Lectures, Queen's College, Belfast, for Session 1867–68, ... 24

7. An Enlarged Digest of Subjects and Courses pursued in Queen's College, Belfast, ... 26
8. General Class Examination at the end of the Session 1866–67, . 36

Matriculation Examination, October, 1867, ... 75

Scholarship Examinations, October, 1867, ... 77

THE REPORT

OF THE

PRESIDENT OF QUEEN'S COLLEGE, BELFAST,

FOR

THE YEAR ENDING JUNE 10, 1868.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

I have the honour of presenting to your Majesty the following Report regarding the condition of the College for the year ending the 10th of June, 1868, embracing the three Terms which constituted the Session now concluded. The first Term commenced, as usual, in October last, when the various examinations for Matriculation and Scholarships were held in accordance with the announcements of the calendar; after which time the different courses of lectures and study were vigorously prosecuted in the different departments. I have the satisfaction of stating that the attendance of students during the past year amounted to 390. In the former year the number present, and given in my last Report, was 387. Since the opening of the College no Session has passed over marked by greater diligence and assiduity, and by a more general observance of order and discipline on the part of the students, than the last. The few cases of departure from rule or propriety, which came under my notice, were generally disposed of by myself, without the necessity of having them referred to the jurisdiction of the Council. As attention, good conduct, and zeal always lead to important results, so the improvement and success of the great body of the students, have been highly creditable to themselves, and gratifying to the Professors. In the various testing examinations, whether those conducted within the walls of the College itself, for Scholarships, Exhibitions, and Prizes, or those of the Queen's University for its high distinctions and rewards, many of our students, during the past year, have won positions for themselves which attest their past labours and exertions, whilst affording an encouraging earnest of their future success in life. The reports of the Civil Service Commissioners, and of different Governmental authorities at home and abroad, continue to afford most satisfactory testimony that the students of this College still hold their place amongst those of the other universities of the empire, not only in the arenas of scientific and literary competition, but in the practical work afterwards assigned to them in the various departments of the public service. Testimonies are constantly reaching the College, from various quarters, regard-

ing the advancement of former students, which establish the important fact that the instruction imparted within these walls is sound in its quality, and extensive in its range.

The subjoined tabular returns will present a condensed view of the condition of the College from the date of its inauguration in 1849-50 to the close of this Session:—

I.—Numbers and Religious Persuasions of Students attending Lectures in Queen's College, Belfast, in each Session from its opening.

Sessions.	Matriculated.	Non-Matriculated.	Total.	Established Church.	Roman Catholic.	Presbyterian.	Methodist.	Independent.	Various.	Total.
1849–50, . .	90	105	195	33	5	145	4	1	7	195
1850–51, . .	110	75	185	33	10	136	4	1	1	185
1851–52, . .	120	69	189	40	14	129	5	–	1	189
1852–53, . .	101	53	154	33	15	100	4	–	2	154
1853–54, . .	114	54	168	36	14	107	6	–	5	168
1854–55, . .	118	65	183	34	14	131	3	–	1	183
1855–56, . .	119	74	193	33	19	131	5	2	3	193
1856–57, . .	136	58	194	35	14	131	3	2	9	194
1857–58, . .	153	54	207	31	14	154	4	1	3	207
1858–59, . .	160	63	223	45	14	153	8	2	1	223
1859–60, . .	199	58	257	43	16	184	8	2	4	257
1860–61, . .	239	73	312	57	22	216	7	–	10	312
1861–62, . .	299	76	375	59	17	256	13	4	16	375
1862–63, . .	335	53	388	61	24	275	11	3	14	388
1863–64, . .	340	47	387	63	26	261	10	3	24	387
1864–65, . .	356	49	405	58	22	285	9	1	30	405
1865–66, . .	360	53	413	60	19	281	13	2	38	413
1866–67, . .	357	30	387	57	19	225	18	1	67	387
1867–68, . .	357	33	390	59	16	233	25	2	55	390

II.—Numbers and Religious Persuasions of Students who have entered Queen's College, Belfast, in each year since its opening.

Sessions.	Matriculated.	Non-Matriculated.	Total.	Established Church.	Roman Catholic.	Presbyterian.	Methodist.	Independent.	Various.	Total.
1849–50, . .	90	105	195	33	5	145	4	1	7	195
1850–51, . .	51	42	93	15	7	68	1	–	2	93
1851–52, . .	42	40	82	25	7	47	2	–	1	82
1852–53, . .	31	23	54	16	7	28	2	–	1	54
1853–54, . .	39	23	62	14	5	36	3	–	4	62
1854–55, . .	41	38	79	13	6	56	2	–	2	79
1855–56, . .	33	29	62	17	5	36	2	2	–	62
1856–57, . .	40	28	68	18	4	40	1	–	5	68
1857–58, . .	43	28	71	8	6	55	2	–	–	71
1858–59, . .	51	37	88	24	8	51	4	1	–	88
1859–60, . .	66	24	90	14	6	64	4	–	2	90
1860–61, . .	96	41	137	29	13	85	3	–	7	137
1861–62, . .	114	38	152	27	5	101	6	3	10	152
1862–63, . .	115	22	137	23	12	92	5	–	5	137
1863–64, . .	109	18	127	25	5	86	3	1	7	127
1864–65, . .	108	27	135	22	6	97	3	–	7	135
1865–66, . .	88	30	118	17	7	83	5	–	6	118
1866–67, . .	95	11	106	16	5	61	10	–	14	106
1867–68, . .	90	22	111	20	5	63	1	1	22	111
	1,342	*626	1,967	375	125	1,294	63	9	101	1,968

* Of the 626 who entered as non-matriculated Students, 115 afterwards passed a matriculation examination. The College Register contains 1,457 matriculated and 512 non-matriculated, in all 1,968 students.

III.—Return showing the Number of Students attending the Lectures of each Professor in each year since the opening of the College.

Professor of	1849-50.	1850-51.	1851-52.	1852-53.	1853-54.	1854-55.	1855-56.	1856-57.	1857-58.	1858-59.	1859-60.	1860-61.	1861-62.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.
Greek,	71	74	46	23	32	38	43	36	44	58	77	100	140	157	120	133	118	74
Latin,	63	72	44	25	32	35	40	29	44	54	72	94	139	149	113	118	112	96
Mathematics,	86	70	51	36	42	44	45	52	55	62	78	95	106	122	111	113	98	80
English,	52	46	53	35	44	44	51	43	56	65	73	100	116	135	125	128	113	102
Modern Languages,	62	56	41	31	34	52	43	52	56	63	78	150	177	150	125	146	151	150
Celtic,	The Lectures open to the public.														Vacant.			
Natural Philosophy,	48	43	61	29	40	35	35	37	43	34	46	95	95	104	106	102	116	113
Natural History,	12	49	75	52	58	68	58	69	62	87	84	77	77	83	112	121	101	97
Mineralogy,	*–	6	14	13	15	13	9	20	13	11	16							
Logic and Metaphysics,	3	–	45	39	44	45	43	51	46	54	44	79	106	114	103	91	116	101
Chemistry,	40	56	75	53	62	70	60	76	68	88	99	82	106	101	104	122	104	–
Engineering,	10	13	15	9	12	12	8	17	16	11	16	14	16	25	30	31	29	27
Agriculture and Medical Jurisprudence,	13	21	24	14	22	17	16	20	25	22	27	21	24	22	–	–	–	–
															25	30	30	35
Anatomy,	35	44	55	61	53	63	65	46	52	68	81	101	107	105	114	132	138	155
Medicine,	9	17	17	12	15	18	33	27	19	22	29	25	42	27	36	44	48	67
Surgery,	24	15	26	29	28	30	48	32	30	29	39	51	53	54	47	50	55	77
Midwifery,	14	10	12	16	17	18	24	13	7	17	14	26	36	22	34	19	23	36
Materia Medica,	11	14	16	17	17	23	25	11	13	22	27	33	38	37	29	38	47	47
English Law,	17	16	17	15	11	15	10	14	12	13	11	16	14	12	12	14	19	13
Jurisprudence,	11	11	23	10	19	11	15	12	27	20	23	19	20	29	27	31	34	26

This return is given more fully in detail in the Appendix, pp. 14, 15.
The return of Lectures delivered in each Session appears in pp. 20, 21 of the Appendix.

IV.—Return of the Number of Medical Students in attendance in each Session.

Session.	Matriculated.	Non-Matriculated.	Total.	Session.	Matriculated.	Non-Matriculated.	Total.
1849–50,	28	27	55	1859–60,	56	39	95
1850–51,	20	35	55	1860–61,	70	46	116
1851–52,	25	39	64	1861–62,	81	48	129
1852–53,	29	33	62	1862–63,	89	33	122
1853–54,	29	37	66	1863–64,	110	33	143
1854–55,	39	36	75	1864–65,	126	25	151
1855–56,	33	48	81	1865–66,	130	29	159
1856–57,	36	25	61	1866–67,	157	17	174
1857–58,	35	32	67	1867–68,	163	18	181
1858–59,	45	34	79				

It will be observed from these returns that a most remarkable change has of late years taken place in the relative numbers of matriculated and non-matriculated students, particularly since the Queen's University has come into full operation, and is exercising its functions and privileges in the conferring of degrees in the several departments of Arts, Medicine, and Law. Let the Session, 1855-56, furnish an example. In that year 193 students were in attendance in the College; of these 119 were matriculated, and 74 non-matriculated. During the past year, the 390 students present have been made up of 357 matriculated, and only 33 non-matriculated—17 of these belonging to the Medical School.

Whilst I rejoice that the existence and exercise of university privileges have produced the desired and natural results, I cannot but express regret that a larger number of young men—sons, for instance, of merchants and men of enterprise and wealth—do not avail themselves of the high advantages presented to them of

attending, as non-matriculated students, such lectures of the distinguished Professors of this College as might contribute to extend their knowledge, educate their minds, and elevate their tastes for intellectual pursuits. On the continent of Europe, in America, in England, and in Scotland particularly, similar advantages have been properly appreciated, and with most advantageous results. The rapid acquirement of wealth demands the accessories of intellectual cultivation and mental refinement. Any youth, devoting a little time daily for two or three sessions to such collegiate classes, as desire, habit, or future avocation might suggest, would easily acquire advantages elevating to himself and beneficial to society.

The continued prosperity of the Medical School will be easily deducible from the table that refers to it. That this important department should have steadily risen from 55 students, (only 28 then being matriculated,) in the year 1850, to 181 in the past Session, 163 being matriculated, is a very remarkable increase, and fully justifies the choice which the original founders of the College made in selecting Belfast, as the site for the Northern College, principally in regard to the advantages which this town presents for founding and sustaining a great Medical School. The General Hospital of Belfast, now extended and increased in its accommodation by the great munificence of Mr. Mulholland and Mr. Charters—the zeal and ability of the medical staff presiding over and giving instruction in that admirable establishment—the existence of the new and commodious anatomical rooms within the College grounds—the teaching power within the medical faculty itself, and the advantages accruing to the Medical School by the contiguity of the Botanic Gardens,—all these, have contributed to place this department of the College in a very satisfactory condition.

Respecting the anatomical and medical buildings, which are now nearly completed, they are certainly amongst the best in the kingdom for spaciousness, ventilation, and adaptation to the purposes to which they are devoted. The medical classes are now transferred to this building, whilst the museum belonging to that department has been placed in a suitable room within its walls.

The new Library is now nearly finished, and will be ready for occupation at the beginning of the ensuing Session. When opened, the large reading-room on the ground floor and the fine galleries above, with the retiring-rooms below, will constitute a most handsome and commodious building. On the part of all the collegiate authorities, I must tender my thanks to the heads of two successive Governments for obtaining from Parliament the necessary grants for founding and carrying on this most necessary work. We accept this liberality in regard to these buildings as an expression of confidence on the part of your Majesty's advisers, that this College is destined to accomplish the great objects contemplated by its illustrious founders.

One only drawback, in reference to the Library and Museums of the College, a sense of duty compels me to notice in this Report. Personally I took my full share in the efforts that secured, some years ago, a grant of £1,600 per annum to each of the Queen's Colleges, for the founding and extending of the Libraries and

Museums, and for the constant supply of the necessary objects of illustration, and of apparatus for experiments—all absolutely indispensable in this age of scientific discovery and advancement. £1,000 a year to each College still fortunately remains for its maintenance, and for the purposes above indicated. £600 a year of the £1,600 referred to was abstracted for increasing the salaries of the Professors. That just increase, too long withheld, ought to have been made from funds entirely distinct, without infringing on a grant barely adequate for founding and sustaining such Libraries and Museums as ought to exist in a public Governmental College, embracing all the departments of Arts, and those also of Medicine and of Law. I draw your Majesty's attention to the want which is already felt through this reduction of the grant, hoping that an application, soon to be made for its restoration, may, on its merits, be favourably received.

Notwithstanding the urgency with which the question of intermediate schools has been pressed for the last fourteen years on different administrations, no step has yet been taken by Government to found or foster such establishments in Ireland. The want of academies, intermediate between the Universities and the National schools is as universally felt by parents and youths as it has been, and still is, unreservedly admitted by your Majesty's advisers. The question may be connected with difficulties of various kinds; but where the deficiency extends to all the provinces, and affects the interests of all denominations and of the community at large, these obstacles would vanish, were the question taken up with a fixed determination to extend the blessings of a sound and practical education, in order to qualify young men for the colleges, for the public service, for professions, and for mercantile pursuits. The proposals to have the Classics and French taught in the National Schools have been rejected, whilst the investigations of the present Commission on Irish Education are strictly limited to the question of primary instruction. That Commission, however, is enabled even under these restricted limits of its instructions to deal with the subject as it relates to the practicability and desirableness of introducing the teaching of Classics and French, in certain cases and under prescribed regulations, into National schools; and I trust that its members may be disposed to enter fully into the consideration of a question of great importance to the inhabitants of this country. Scotland has long enjoyed the advantages of intermediate education, and the results have as long been felt in elevating its population in the social and intellectual scale. England is supplying the deficiency to some extent, through her system of Proprietary schools, those schools now embracing a large number of pupils. Ireland is a poor country. The National schools swept away many of the academies in which the higher branches were taught, and it devolves on any Administration to encourage, at the small expense required, the voluntary efforts of the community to secure to thousands the blessings of an education suited to the demands of the time and of the community at large.

At the beginning of the session the sum of £1,400 was appropriated to the scholarships in the different departments, and £100 for class prizes, making up the annual amount placed for these purposes on the Consolidated Fund. The Tennent and Drennan exhibitions; the valuable and important ones of Dr. Sullivan, of Mr. Charters in medicine, literature, and science; and of Mr. Coates in engineering, have also been awarded to the successful competitors. Mr. R. Mackay Wilson, for reasons satisfactory to the Council, has held his exhibitions over in order to add them afterwards to those he has founded. In assigning all these scholarships prizes and exhibitions the Council enter most carefully into a consideration of the answering of the students both positive and relative, always making merit the test of success.

The Deans of Residences have furnished me with reports regarding the character and conduct of the students placed by statute under their spiritual jurisdiction. In so far these reports are satisfactory; but until the law is changed giving these functionaries more direct and extended jurisdiction, the important design of their having been attached to the colleges, and of their appointment cannot be fully answered. The Presbyterian Dean, Dr. Porter, has the advantage of having many of the students placed directly under his charge in the General Assembly's college. The same will apply in future to those of the Wesleyan body, as I am officially instructed that the Rev. William Arthur, the President of their new college here, has been nominated by the Conference to succeed the Rev. Mr. M'Kay, as Dean of Residences. The Rev. Mr. Hoare has informed me that next session he shall be enabled to take special charge of the students of the Church of England.

Without my strong testimony once more expressed regarding the spirit of harmony, co-operation, and good will that continues to pervade the whole college, this report would be incomplete. All through the professorial ranks and amongst the students themselves, belonging as they do to various Churches, true sentiments of cordiality continue to unite the entire body; and it affords me the utmost satisfaction to bear record that no instance of religious dissension has ever come under my notice. In this respect, as well as in its general success and influence, this non-sectarian college is accomplishing the noble designs of its patrons and founders, and of Parliament itself. Already it has abundantly proved its adaptation to a mixed industrial community.

As one of the constituents of the Queen's University in Ireland, this college continues to hold its high position. The number of students it furnishes yearly for graduation, as well as the distinguished place they annually occupy in the lists of University honours and exhibitions, affords a most satisfactory proof of the great ability of the professors, and the zeal and talent of their pupils. That any difficulty should arise as to the granting of representation in Parliament to the Queen's University under the new Reform Act is a matter deeply to be lamented. The justice and expediency of this has been officially presented to your Majesty's advisers; and the question has, in various ways, and from the most influential quarters been pressed on their attention; and whilst the strength of the

claim is fully admitted, it is to be hoped that a member will now be assigned to our University. To leave it in a state of isolation as the only unrepresented University in the empire, when already it presents a constituency of 780 unsurpassed by any other for general intelligence—a constituency which will steadily increase every year, would injure the great interests of education, and deprive the graduates of constitutional privileges to which they are justly entitled. The average annual increase of graduates is about 86.

Various returns will be found given at full length in the subjoined Appendix—viz., statements of the fees paid to each professor, of the number of students in each class, of the number of lectures delivered from the different chairs, together with the accounts of expenditure, an enlarged digest of subjects, and the papers used at the various examinations during the past session.

All of which, on behalf of this College, is testified by your Majesty's most dutiful servant,

P. SHULDHAM HENRY,
President.

Queen's College, Belfast,
3rd July, 1868.

APPENDIX.

APPENDIX, No. 1.

Queen's College, Belfast, and Queen's University.

The College is a Corporation under the name and style of "Queen's College, Belfast." It was founded under the provisions of the Act 8 & 9 Victoria, cap. 66, intituled "An Act to enable Her Majesty to endow new Colleges for the Advancement of Learning in Ireland." Under the powers given by this Act, it was determined to found three Colleges. Belfast, Cork, and Galway, were selected as the sites of these Colleges, and on the 30th day of December, 1845, letters patent were issued, incorporating them. The Presidents and Vice-Presidents of the three Colleges were formed into a Board, called "The Board of Queen's Colleges," for the purpose of drawing up the statutes and arranging the system of education to be pursued in them.

On the 4th of August, 1849, the Professors were appointed, and the Colleges opened for the reception of students on the 30th October, in the same year.

Letters patent, constituting the statutes, were issued on the 11th of December, 1849, and a further charter was issued in the year 1863.

The Council of the College.

The President.
The Vice-President.
C. MacDouall, LL.D., Professor of Greek.
James Thomson, A.M., Professor of Civil Engineering.
P. Redfern, M.D., Professor of Anatomy.
J. Purser, M.A., Professor of Mathematics.
W. Nesbitt, M.A., Professor of Latin.
J. Cuming, M.D., Professor of Medicine.

Professors.

The Greek Language,	Charles MacDouall, LL.D., M.R.A.S.
The Latin Language,	William Nesbitt, M.A.
History and English Literature,	Charles Duke Yonge, B.A. Oxon.
Modern Languages,	A. L. Meissner, PH.D.
Mathematics,	John Purser, M.A., M.R.I.A.
Natural Philosophy,	Joseph David Everett, M.A., D.C.L.
Chemistry,	Thomas Andrews, M.D., F.R.S., M.R.I.A.
Natural History,	WyvilleThomson, LL.D., F.R.S.E., F.G.S., M.R.I.A.
Logic and Metaphysics,	Rev. James M'Cosh, LL.D.
Civil Engineering,	James Thomson, C.E., A.M.
Agriculture,	John F. Hodges, M.D., F.C.S.
Anatomy and Physiology,	Peter Redfern, M.D. Lond., F.R.C.S.
Practice of Medicine,	James Cuming, M.D.
Practice of Surgery,	Alexander Gordon, M.D.
Materia Medica,	James Seaton Reid, M.D.
Midwifery,	R. F. Dill, M.D.
English Law,	Echlin Molyneux, A.M.
Jurisprudence and Political Economy,	T. E. Cliffe Leslie, LL.B.

Appendix, No. 1.

Queen's College, Belfast, and Queen's University.

OFFICE BEARERS.

Curator of Museum,	The Professor of Mineralogy and Geology.
Registrar,	Rev. Richard Oulton, B.D.
Librarian,	Rev. George Hill.
Bursar,	Alexander Dickey, Esq.

DEANS OF RESIDENCES.

United Church of England and Ireland,	Rev. Edward N. Hoare, A.B.
General Assembly of the Presbyterian Church in Ireland,	Rev. Josias Leslie Porter, D.D., LL.D.
Irish Association of Non-Subscribing Presbyterians,	Rev. John Porter.
Wesleyan Methodists,	Rev. Joseph Wm. M'Kay.

The students of the College are either Matriculated or Non-matriculated. All the courses for Matriculated students in Arts, including the Department of Civil Engineering, and also in the Faculties of Medicine and of Law, will be found in the Calendar, which is published annually.

Non-matriculated students, on paying the regulated class fees, and signing an engagement to observe order and discipline in the College, are permitted, without undergoing a preliminary examination, to attend any separate course or courses of Lectures; but are not permitted to become candidates for Scholarships or Prizes, or to enjoy other privileges of the Matriculated students.

Students in any of the Faculties can be admitted *ad eundem* from the other Queen's Colleges, or from any University capable of granting degrees.

COLLEGIATE SCHOLARSHIPS.

In the FACULTY OF ARTS—30 Junior Scholarships, of £24 each, are awarded to Undergraduates—15 for proficiency in Literature, and 15 for proficiency in Science; also, 8 Senior Scholarships, of £40 each, to Graduates, one being limited to students who have also completed the course for the degree of LL.B.; and 5 Scholarships, of £20 each, to Engineering Students.

In the FACULTY OF MEDICINE—8 Junior Scholarships, of £25 each, are awarded.

In the FACULTY OF LAW—3 Junior Scholarships, of £20 each, are awarded.

SCHOLARSHIPS AWARDED IN THE SEVERAL FACULTIES, 1866-67.

8 Senior Scholarships awarded.
21 Junior Scholarships in Arts awarded.
4 Engineering Scholarships.
8 Medical Scholarships.
3 Law Scholarships.

1867-68.

8 Senior Scholarships awarded.
21 Junior Scholarships in Arts awarded.
5 Engineering Scholarships.
6 Medical Scholarships.
3 Law Scholarships.

By an order of Her Majesty in Council, of 21st May, 1855, applying to the Civil Service, it is ordained that "every person nominated to a junior situation should obtain a certificate of qualification before entering on his duties." The ordinary classes in Queen's College embrace the branches required in the Examinations for the Civil Service, and also in the Examination for students intending to become candidates for commissions in the Royal Artillery and Engineers, and for appointments to the Civil Service of India, both of which are now thrown open to public competition.

Queen's University in Ireland.

Queen's College, Belfast, and Queen's University.

The charter founding the Queen's University in Ireland received the Royal sanction in the year 1850, and it provides that its Senate should have the power of conferring upon the students of the Queen's Colleges of Belfast, Cork, and Galway, such degrees and distinctions, in the Faculties of Arts, Law, and Physic, as are granted and conferred in other Colleges and Universities of Great Britain and Ireland. It further ordains that any of the students of the three Queen's Colleges, who shall have obtained such degrees in any of the several Faculties of Arts, Medicine, and Law, as shall be conferred by the Chancellor and Senate of the Queen's University, shall be fully possessed of all such rights, privileges, and immunities, as belong to similar degrees granted by other Universities or Colleges, and shall be entitled to whatever rank and precedence is derived from similar degrees granted by other Universities.

By the charter of the Queen's University, candidates for Degrees in Medicine are required to have attended *at least two courses of Medical Lectures* in some one of the Queen's Colleges. For the remainder of the courses of Medical Lectures, authenticated certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools, recognised by the Senate of the Queen's University in Ireland.

The Chancellor and Senate also have the power of admitting, by special grace, Graduates of other Universities to similar and equal degrees.

In order to obtain a degree or diploma in the Queen's University it is necessary to enter the College as a Matriculated Student, to pass the entrance or Matriculation Examination, and to pursue a fixed course of study.

The Matriculated Students may be classified as follow:—

I.	Those intending to proceed to the		Degrees of A.B. and A.M.
II.	,,	,,	Degree of M.D.
III.	,,	,,	Diploma of Elementary Law.
IV.	,,	,,	Degrees of LL.B. and LL.D.
V.	,,	,,	Diploma of Civil Engineering.
VI.	,,	,,	Diploma of Surgery.

The Senate.

Chancellor.—The Right Honorable George William Frederick, Earl of Clarendon, K.G., G.C.B., &c.
Vice-Chancellor.—The Right Hon. Maziere Brady, P.C., M.R.I.A., &c.
The Right Hon. David R. Pigot, Lord Chief Baron of the Exchequer, M.R.I.A., &c.
The Rev. P. Shuldham Henry, D.D., President Queen's College, Belfast.
Sir Robert Kane, F.R.S., M.R.I.A., &c., President Queen's College, Cork.
Edward Berwick, Esq., President Queen's College, Galway.
Sir Richard Griffith, Bart., LL.D., M.R.I.A., Commissioner of Public Works.
Sir Dominic J. Corrigan, Bart., M.D., M.R.I.A., Physician in Ordinary to the Queen in Ireland.
Major-General Sir Thomas Askew Larcom, R.E., K.C.B., LL.D., F.R.S., M.R.I.A., &c.
James Gibson, A.M., M.R.I.A., Barrister-at-Law.
The Right Hon. James Henry Monahan, Lord Chief Justice of the Common Pleas.
Robert Adams, A.M., M.D., F.R.C.S.
The Right Honorable Sir Robert Peel, Bart., M.P.
The Right Reverend the Lord Bishop of Killaloe, D.D.
His Grace the Archbishop of Dublin.
Thomas A. Shillington, Esq., J.P.
The Right Honorable the Earl of Dunraven and Mount-Earl, K.P.
The Lord Talbot de Malahide, F.R.S., P.R.I.A.
The Lord Clermont, D.L.
Right Honorable William Monsell, M.P.
Right Honorable Thomas O'Hagan, Justice Common Pleas.
William K. Sullivan, esq., PH.D.
David Ross, M.A., LL.B.
Secretary.—G. Johnstone Stoney, M.A.—Office, Dublin Castle.

The Senate holds its sitting in Dublin Castle, where the examinations of the students of the three Colleges, for Graduation and University Exhibitions, are annually conducted by Examiners appointed by the Senate from year to year.

APPENDIX, No. 2.

RETURN of the NUMBER of STUDENTS attending each CLASS in the Queen's College, Belfast, in each Year.

CLASS.	SESSION.								
	1849–50.	'50-51.	'51-52.	'52-53.	'53-54.	'54-55.	'55-56.	'56-57.	'57-58.
Greek—1st year,	71	47	28	16	21	26	29	24	31
,, 2nd ,,	–	27	18	7	11	12	14	12	13
,, Higher,	–	–	–	–	–	–	–	–	–
Latin—1st year,	63	45	27	19	21	24	27	19	33
,, 2nd ,,	–	27	17	6	11	11	13	10	11
,, Higher,	–	–	–	–	–	–	–	–	–
The English Language,	52	46	28	20	24	28	31	24	36
History and English Literature, Senior ,, ,,	–	–	25	15	20	16	20	19	20
Modern Languages (French, German, Italian),	62	36	41	27	34	37	29	40	40
Senior ,,	–	20	28	16	15	15	19	12	16
The Celtic Languages,	*The Lectures in each Session open to the Public.*							–	–
Mathematics—1st year,	86	58	40	25	29	33	30	35	39
,, 2nd ,,	–	12	11	11	13	11	15	17	16
,, Higher,	–	–	–	–	–	–	–	–	–
Nat. Philosophy—Higher Class,	–	–	–	–	–	6	6	8	7
,, Mathematical Physics, &c.	32	32	46	24	29	23	24	19	26
,, Experimental Physics,	48	59	57	29	40	34	36	37	41
,, Practical Mechanics,	7	3	6	3	4	3	3	2	–
Natural Philosophy applied,	–	–	–	–	–	–	–	–	7
Chemistry,	37	53	63	44	51	60	50	70	60
Practical Chemistry,	6	7	14	10	15	14	12	10	11
Laboratory,	–	6	8	8	9	9	10	15	10
Zoology,	12	34	35	29	31	43	31	43	34
Botany,	12	49	46	35	37	46	36	44	34
Physical Geography,	–	–	29	17	21	19	20	21	28
Logic,	3	–	27	17	21	26	20	27	22
Metaphysics,	–	–	18	15	16	11	17	20	15
Higher Logic and Metaphysics,	–	–	6	7	7	8	6	7	9
Mineralogy and Geology,	*Public.*	6	14	13	15	13	9	20	13
Surveying,	10	9	9	6	6	9	4	–	–
Civil Engineering,	–	4	6	3	4	3	4	17	14
Theory of Agriculture,	11	8	7	2	6	5	5	4	7
Practice of Agriculture,	–	5	3	2	5	5	1	1	3
Diseases of Farm Animals,	–	5	3	2	5	5	1	1	4
Medical Jurisprudence,	2	8	14	10	13	8	10	15	16
Anatomy,	25	36	48	45	44	51	44	39	39
Practical Anatomy,	27	32	35	49	41	46	53	33	41
Practice of Medicine,	9	17	17	12	15	18	33	27	19
Practice of Surgery,	24	15	26	29	28	30	48	32	30
Materia Medica,	11	14	16	17	17	23	25	11	18
Midwifery,	14	10	12	16	17	18	24	13	7
Law of Property, Equity of Bankruptcy, Common and Criminal Law, Evidence and Pleading,	17	16	17	15	11	5	10	14	12
Jurisprudence and Political Economy, Arts,	–	–	12	2	9	6	8	2	18
Civil Law, Constitutional, Colonial, and International Law, Jurisprudence,	11	11	13	8	10	5	9	10	10
Arabic,	–	–	–	–	–	–	–	–	–
Hindustani,	–	–	–	–	–	–	–	–	–
Sanskrit,	–	–	–	–	–	–	–	–	–

APPENDIX, No. 2—*continued.*

RETURN of the NUMBER of STUDENTS attending each CLASS in the Queen's College, Belfast, in each Year—*continued.*

CLASS.	SESSION.									
	'58–59.	'59–60.	'60–61.	'61–62.	'62–63.	'63–64.	'64–65.	'65–66.	'66–67.	'67–68.
Greek—1st year,	36	45	69	81	83	66	79	63	49	47
,, 2nd ,,	17	23	25	49	63	44	40	49	21	19
,, Higher,	5	4	4	7	7	9	12	6	4	5
Latin—1st year,	34	46	69	84	83	65	78	64	50	48
,, 2nd ,,	18	22	23	49	60	40	33	44	40	34
,, Higher,	2	3	2	6	6	8	7	4	6	7
The English Language,	41	49	72	85	85	70	80	67	49	46
History, English Literature,	24	24	28	5 / 30	8 / 41	6 / 52	4 / 48	4 / 42	5 / 52	9 / 41
Modern Languages (French, German, Italian),	50	76	140	124	110	99	110	115	109	115
Senior ,,	13	17	10	54	43	26	36	36	46	33
The Celtic Languages,	*The Lectures in each Session open to the Public.*						–	–	–	–
Mathematics—1st year,	45	61	83	93	102	85	92	75	62	58
,, 2nd ,,	14	13	13	13	15	20	17	19	12	22
,, Higher,	4	6	3	–	5	6	4	4	6	33
Nat. Philosophy—Higher Class,	4	9	–	–	–	–	5	4	–	9
,, Mathematical Physics, &c.	25	24	64	67	72	69	60	68	56	51
,, Experimental Physics,	28	42	87	86	94	95	87	120	104	90
Natural Philosophy applied,	3	4	4	–	2	5	6	7	4	6
Chemistry,	74	81	64*	89	89	81	93	95	91	84
Practical Chemistry,	14	21	21	20	24	28	44	37	44	51
Laboratory,	11	10	12	15	15	8	14	16	16	16
Zoology,	63	56	37*	57	66	90	82	84	92	83
Botany,	62	55	40*	56	62	90	92	27	50	51
Physical Geography,	23	28	30	7†	7	–	–	–	–	–
Logic,	29	29	35	65	66	57	49	68	52	43
Metaphysics,	19	15	24	22	34	40	40	41	39	29
Higher Logic,	8	–	–	10	12	25	14	24	33	22
Mineralogy and Geology,	11	16	7‡	11	10	12	14	15	5	11
Engineering, 1st year,	7	12	9	10	11	15	15	14	12	8
Engineering, 2nd year, lectures, practice,	3	4	4	6	11	8	12 / 12	10 / 9	8 / 8	10 / 10
Engineering, 3rd year, lectures, practice,	–	–	–	–	3	7	7 / 7	7 / 7	7 / 5	6 / 6
Theory of Agriculture,	7	7	6	6	6	–	–	–	–	–
Practice of Agriculture,	1	4	3	1	–	–	–	–	–	–
Diseases of Farm Animals,	2	3	2	1	–	–	–	–	–	–
Medical Jurisprudence,	13	17	14	18	16	25	30	28	35	33
Anatomy,	59	60	86	83	83	87	99	109	127	120
Practical Anatomy,	44	62	80	85	91	96	126	124	149	159
Practice of Medicine,	22	29	25	42	27	36	44	48	67	70
Practice of Surgery,	29	39	51	53	53	46	48	55	77	81
Materia Medica,	22	27	33	38	37	29	38	47	47	38
Midwifery,	17	14	26	36	22	34	19	23	36	37
Law of Property, Equity and Bankruptcy, Common and Criminal Law, Evidence and Pleading,	13	16	16	14	12	12	14	19	13	20
Political Economy, Arts,	9	7	10	8	18	17	20	15	16	8
Civil Law; Constitutional, Colonial, and International Law; Jurisprudence,	11	17	10	12	11	10	11	19	11	16
Arabic,	–	1	–	–	–	–	–	–	–	–
Hindustani,	–	2	3	2	3	–	–	–	–	–
Sanskrit,	–	6	3	4	5	4	4	–	–	–
Operative Surgery,	–	–	–	–	11	2	–	16	23	12

* No Arts Students this Session, owing to change of Statutes.
† Not now required in third year Arts.
‡ No Engineering Students this Session, owing to change of Statutes.

APPENDIX,

Return of the Amount of Fees received by each

Professor of	1849–50.	1850–51.	1851–52.	1852–53.	1853–54.	1854–55.	1855–56.	1856–57.	1857–58.
	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Greek,	*38 10	83 0	50 0	27 5	38 5	46 5	51 15	44 15	51 0
Latin,	*73 15	79 0	50 10	31 5	38 5	44 5	47 15	39 15	53 0
English History and Literature,	50 5	50 5	47 10	31 5	43 5	45 5	59 5	43 15	57 10
Logic & Metaphysics,	6 0	–	† 59 5	34 5	37 15	41 0	41 15	48 5	46 15
Mathematics,	116 15	97 10	69 15	43 0	54 10	59 0	60 10	62 15	69 10
Natural Philosophy,	79 5	70 15	99 10	47 0	73 15	76 15	59 10	62 15	72 0
Chemistry, Practical Chemistry	85 5	104 0	117 5	91 10	111 10	131 15	105 10	133 0	113 10
Anatomy and Physiology, Practical Anatomy,	143 0	170 0	195 15	230 10	228 0	250 0	256 0	181 0	206 0
Natural History and Botany,	20 10	69 0	70 15	50 15	55 0	76 15	59 10	56 0	52 10
Modern Languages,	97 0	84 0	63 0	50 0	61 0	85 0	74 0	86 0	96 0
Mineralogy and Geology,	–	7 10	24 15	17 15	20 15	18 0	12 10	37 0	20 5
Jurisprudence and Political Economy,	20 0	21 0	35 15	18 15	28 0	14 10	29 5	22 10	31 15
English Law,	32 0	29 0	37 0	23 0	20 0	16 0	21 0	27 0	21 0
Civil Engineering,	16 0	24 10	22 0	14 0	17 15	21 0	13 10	27 0	22 0
Agriculture and Medical Jurisprudence,	15 10	41 0	49 5	22 0	46 0	32 15	26 0	25 10	40 5
Practice of Medicine,	17 0	31 0	32 0	18 0	30 0	30 0	56 0	43 10	26 0
Surgery,	41 0	21 10	36 0	51 0	43 0	43 0	74 0	42 10	34 0
Materia Medica,	22 0	28 0	26 0	29 0	33 0	43 0	45 0	20 0	34 0
Midwifery,	28 0	18 0	22 0	27 0	31 0	33 0	44 0	24 0	12 0
Teacher of Drawing,	–	–	–	–	–	–	–	32 0	25 0

* In the Session of 1849–50, Medical Students were required to attend the Greek and Latin Classes, but have since been exempt from attending either class.

† Professor M'Cosh was appointed in Session 1851–52, and taught and received fees from Students properly belonging to the previous Session.

Queen's College, Belfast, May, 1868.

Appendix, No. 4.

APPENDIX,

Expenditure of One Year's Additional Grant.

Account of the Expenditure of One Year's Additional Grant

1. Library of Ancient and Modern Literature and Philology:

	£	s.	d.
Ancient Classical Languages and Philology,	21	7	11
English History and Literature,	17	14	7
Foreign Modern Languages,	14	3	9
Works of General Interest, &c.,	77	5	3
	130	11	6

2. Libraries, Museum, &c., Mathematical, Physical, and Chemical Sciences:

Mathematical and Physical Libraries,	14	12	8
Chemical Library,	20	16	1
Museum and Cabinet of Physical Science,	78	18	6
,, Laboratory, Chemical Science,	25	12	4
	139	19	7

No. 3.

Professor in the Queen's College, Belfast, in each Year.

1858–59.	1859–60.	1860–61.	1861–62.	1862–63.	1863–64.	1864–65.	1865–66.	1866–67.	1867–68.
£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
78 0	*93 5	*131 15	*186 0	*187 15	*221 0	233 10	212 0	131 0	121 0
67 0	†90 0	127 15	185 0	185 15	211 0	220 10	202 0	167 0	152 0
69 0	94 15	117 5	155 10	164 5	163 10	162 10	131 10	143 10	130 10
68 10	39 0	58 10	106 5	134 10	173 10	143 0	183 10	184 10	170 10
97 10	139 10	156 0	183 5	211 5	201 0	208 0	173 0	143 0	135 0
66 10	61 5	180 10	178 15	194 10	183 0	186 0	208 0	198 0	192 0
147 5	184 0	167 0	195 15	210 5	213 10	294 10	252 0	277 10	299 0
262 10	307 0	427 10	‡432 10	‡425 10	‡453 10	567 10	544 0	643 14	652 8
105 5	94 10	70 0	96 10	120 5	157 0	170 0	144 0	154 0	165 0
120 0	159 10	277 0	319 5	270 15	231 0	278 0	247 0	268 0	280 0
21 15	24 15	11 10	16 5	20 10	22 0	25 0	24 0	9 0	20 0
28 10	36 10	28 10	25 15	37 10	38 0	51 0	51 0	46 0	37 0
25 0	28 0	28 0	25 0	21 0	18 0	20 0	25 0	23 0	35 0
22 15	24 15	32 0	40 15	70 0	82 0	97 0	79 0	63 0	70 0
31 5	47 0	43 0	§44 0	§36 15	48 0	55 0	48 0	67 0	63 0
37 0	44 0	37 0	64 10	46 0	59 0	74 0	77 0	103 0	103 0
46 0	65 10	79 13	84 12	96 11	73 0	82 0	94 0	137 0	144 0
39 0	50 0	60 0	69 0	70 0	59 0	73 0	83 0	86 0	71 0
28 0	25 0	48 0	63 0	36 0	66 0	36 0	42 0	64 0	72 0
26 0	22 0	–	–	–	–	–	–	–	–

* Besides for Sanskrit and Hindustani, 1859–60, £35; 1860–61, £22 10*s.*; 1861–62, £25; 1862–63, £32 10*s.*; 1863–64, £20; 1864–5, £20.

† Besides for Arabic in 1859–60, £5.

‡ The Professor of Anatomy pays to his Demonstrator a portion of the fees for Practical Anatomy.

§ No endowment for Medical Jurisprudence. Professor Hodges delivers the lectures, receiving only class fees.

ALEXANDER DICKEY, *Bursar.*

No. 4.

Appendix, No. 4.

to the Queen's College, Belfast, ending 31st March, 1867.

Expenditure of One Year's Additional Grant.

3. Libraries, Museum, and Collection of Objects of the Department of the Natural Sciences:

	£	s.	d.
Library of Natural History,	35	10	11
,, Geology and Mineralogy,	1	10	0
Museum of Natural History,	41	5	7
,, Geology and Mineralogy,	35	12	6
	113	19	0

4. Libraries, Museums, and Collections of Objects of the Department of Engineering:

	£	s.	d.
Library of Engineering,	19	16	10
Instruments and Collections of Engineering,	9	7	6
	29	4	4

Appendix, No. 4.

Appendix, No. 4—*continued.*

Expenditure of One Year's Additional Grant.

Account of the Expenditure of One Year's Additional Grant to the Queen's College, Belfast, ending 31st March, 1867—*continued.*

	£	s.	d.
5. Museum and Library of Medical Science:			
Library of Medical Works,	44	5	6
Anatomical and Pathological Museums, &c.,	51	7	4
Surgical Museum,	2	10	0
Medical Jurisprudence,	27	10	4
	125	13	2
6. Library of Metaphysical, Legal, and Economical Science:			
Law, Jurisprudence, and Political Economy,	26	8	1
Metaphysics,	25	2	6
	51	10	7
7. Printing, Stationery, Advertising, Postages, Office Expenses, &c.,	294	7	8
8. Heating and Lighting,	157	4	4
9. Grounds,	78	16	9
	1,121	6	11
Balance in Bank of Ireland Office, 31st March, 1867,	360	4	7
Total,	1,481	11	6
Amount of One Year's additional Grant,	1,000	0	0
College and Matriculation Fees,	121	0	0
Received for Calendars and Fines,	9	5	6
Balance in Bank, 31st March, 1866,	351	6	0
Total,	1,481	11	6

The Accounts of the College up to 31st March, 1867, have been examined and found correct by the Commissioners for Auditing the Public Accounts.

May, 1868.

Alexander Dickey, *Bursar.*

APPENDIX, No. 5.

General Class Examinations, Queen's College, Belfast.

—	Session 1866-67.	A.M.	P.M.	Session 1867-68.	A.M.	P.M.
The English Language,	Saturday, January 12	—	12—4	Saturday, January 11	—	12—4
Logic,	Saturday, February 9	9—12	—	Saturday, February 8	9—12	—
Physical Geography,	Thursday, February 28	9—12	—	Thursday, February 27	10—1	—
Mineralogy and Geology,	Thursday, February 28	—	2—5	Thursday, February 27	10—1	—
Zoology,	Saturday, March 2	9—12	—	Saturday, February 29	10—1	—
Metaphysics,	Tuesday, April 16	9—12	and 2—5	Tuesday, April 7	9—12	and 2—5
English Literature,	Thursday, April 18	9—12	and 2—5	Wednesday, April 8	9—12	and 2—5
History,	Tuesday, June 4	9—12	—	Thursday, April 9	—	2—5
Practical Anatomy,	Saturday, April 20	9—12	—	Saturday, April 18	9—12	—
Practice of Medicine,	Friday, April 26	9—12	—	Monday, April 27	9—12	—
Midwifery,	Friday, April 26	—	2—5	Monday, April 27	—	2—5
Anatomy and Physiology,	Saturday, April 27	9—12	and 2—5	Tuesday, April 28	9—12	and 2—5
Materia Medica,	Monday, April 29	9—12	—	Wednesday, April 29	9—12	—
Practice of Surgery,	Monday, April 29	—	2—5	Wednesday, April 29	—	2—5
Medical Jurisprudence,	Tuesday, April 30	—	2—5	Thursday, April 30	9—12	—
Modern Languages,	Tuesday, May 28	9—12	and 2—5	Tuesday, June 2	9—12	and 2—5
Greek (First Year),	Wednesday, May 29	9—12	,, 2—5	Wednesday, June 3	9—12	,, 2—5
,, (Second Year),	Thursday, May 30	9—12	,, 2—5	Thursday, June 4	9—12	,, 2—5
Latin (First Year),	Thursday, May 30	9—12	,, 2—5	Thursday, June 4	9—12	,, 2—5
,, (Second Year),	Wednesday, May 29	9—12	,, 2—5	Wednesday, June 3	9—12	,, 2—5
Engineering, 1st, 2nd, and 3rd years,	Thursday, May 30	9—12	,, 2—5	Thursday, June 4	9—12	,, 2—5
Office and Fieldwork,	Wednesday, May 29	—	2—5	Wednesday, June 3	—	2—5
Mathematics,	Friday, May 31	9—12	,, 2—5	Friday, June 5	9—12	and 2—5
Natural Philosophy,	Saturday, June 1	9—12	,, 2—5	Saturday, June 6	9—12	,, 2—5
Chemistry,	Monday, June 3	9—12	,, 2—5	Monday, June 8	9—12	,, 2—5

General Examination of Students in Law, and also of other Students in Political Economy, Botany, and Practical Chemistry at the close of the Lectures on these subjects.

APPENDIX, No. 6.

RETURN of the NUMBER of LECTURES delivered by each Professor in the Queen's College, Belfast, in each YEAR.

—	'49-50.	'50-51.	'51-52.	'52-53.	'53-54.	'54-55.	'55-56.	'56-57.	'57-58.	'58-59.	'59-60.	'60-61.	'61-62.	'62-63.	'63-64.	'64-65.	'65-66.	'66-67.	REMARKS.
Professor of—																			
Greek, . . .	135	232	244	246	236	240	234	235	236	350	500*	460*	440*	360*	360	360	360	360	In addition, examining numerous exercises.
Latin, . . .	162	197	218	221	189	196	232	230	230	275	398	234	234	234	230	324	324	324	Do. do.
History and English Literature, . .	35	55	98	91	104	100	105	105	99	110	123	92	154	146	140	167	167	167	Besides correcting about 700 exercises.
Modern Languages,	208	330	324	307	306	305	319	340	369	307	340	372	372	360	356	356	356	356	
Celtic, . . .	6	6	6	6	6	6	6	6	6	6	6	6	–	–	–	–	–	–	Open to the Public without charge.
Mathematics, . .	135	256	333	248	246	320	346	322	330	400	400	370	370	315	325	330	317	317	Besides three hours each week on which the Senior Scholar meets the Junior Division.
Natural Philosophy	122	257	233	209	256	250	255	307	300	300	242	242	213	182	180	180	190	190	In addition, arranging apparatus, which occupies as much time as the lectures.
Chemistry, . .	134	136	137	129	132	130	138	142	142	140	132	132	132	132	130	130	130	130	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
Practical Chemistry	36	36	36	36	36	36	36	36	34	36	36	36	36	36	36	36	55	55	
Natural History, .	120	120	133	137	139	138	142	140	143	140	140	140	140	140	140	140	140	140	Including lectures in Physical Geography, delivered free to all students.

Mineralogy and Geology, . .	*Public.*	86	54	59	54	55	49	59	52	52	52	52	52	52	52	52	52	52	In addition, daily attendance as Curator in the Museum.
Logic & Metaphysics	–	–	78	142	176	175	164	177	179	167	140	158	194	208	195	195	195	195	In addition, criticising above 600 essays in each session.
Civil Engineering, .	134	138	140	136	140	136	147	118	100	194	196	220	198	328	319	236	247	247	Including practical work under the direction of the Professor.
Agriculture, . .	172	206	205	212	209	213	218	186	190	166	166	156	156	50	50	50	41	41	Including lectures on Medical Jurisprudence, for which there is no salary.
Anatomy and Physiology, . .	115	116	115	115	114	115	117	113	115	115	115	112	108	108	224	261	260	260	In addition, daily practical teaching in the dissecting-room for three hours by the Professor, and four hours by his assistant.
Practice of Medicine,	93	93	92	92	93	94	94	85	75	95	95	95	95	95	95	95	95	95	
Practice of Surgery,	93	94	93	91	91	92	94	94	94	94	94	94	94	93	93	93	93	93	Besides about twenty-five lectures each session on Operative Surgery.
Materia Medica, .	92	91	91	93	90	90	92	80	84	84	84	84	84	84	84	84	84	84	
Midwifery, . .	92	92	92	91	90	93	93	93	93	95	90	80	80	76	76	76	76	76	Besides practical instruction to students which may be required at any hour throughout the year.
English Law, .	24	48	72	96	96	96	96	96	96	96	72	72	96	96	96	96	96	96	No third year Class in 1859–60, or fourth year Class in 1860–61.
Jurisprudence & Political Economy, .	24	48	96	120	120	120	120	120	120	96	120	120	120	120	120	120	120	120	

The above Return gives the number of Meetings of one hour each, in each Class. The system of instruction includes, not merely formal Lectures, but also examination in the business of the course; in some classes these examinations are held daily; in others on fixed days of the week, according to the nature of the subject.

The Professors also conduct the General Scholarship Examinations; and some of them, in addition, the Matriculation and Supplemental Examinations.

* Including about 110 on Sanskrit and Hindustani.

October Examinations of Queen's College, Belfast, 1868.

Days.	Hours.	First Year Students.	Second Year Students.	Third Year Students.	Fourth Year Students.
Tuesday, Oct. 15.	9—12		Suppl. Ex. { English. Mod. Lang. Math.	Suppl. Ex.—Mod. Lang., Math., Nat. Phil., Chem.	Senior Schol.—Latin.
	2—5		Suppl. Ex.—Greek, Latin.	Suppl. Ex.—Greek, Latin, Logic.	Senior Schol.—Latin.
Wednesday, Oct. 16.	9—12		Liter. Schol.—Greek.		Senior Schol.—Greek.
	2—5		Liter. Schol.—Greek.		Senior Schol.—Greek.
Thursday, Oct. 17.	9—12		Med. Engin. } Schol.—Chem.	Previous	Senior Schol.—Chem.
	2—5	Matric.—Math.	Med. Engin. } Schol.—Chem.	Examination,	Senior Schol.—Chem.
Friday, Oct. 18.	9—12	Matric.—Greek, Latin		in Arts	
	2—5			and Engineering,	
Saturday, Oct. 19.	9—12	Matric.—English, *in Arts only.*		of	Senior Schol.—Mod. Hist.
	2—5	Matric.—English, *in Medicine, &c.*		Queen's University.	Senior Schol.—Mod. Hist.

Monday, Oct. 21.	9—12		Med. Schol.—Botany.	Engin. Schol. {Geol. and Phys. Geog.	Senior Schol.—Nat. Hist.
	2—5	Lists of Matriculated Students to be made out.	Med. Schol.—Zoology. Liter. Schol.—English.		Senior Schol.—Nat. Hist.
Tuesday, Oct. 22.	9—12	Science, Med., Engin. } Schol.—Math.	Science, Engin. } Schol.—Math.	Engin. Schol.—Math.	Senior Schol.—Math.
	2—5	Science, Med., Engin. } Schol.—Math.	Science, Engin. } Schol.—Math. Med. Schol.—Anat. and Phys.	Engin. Schol.—Math. Med. Schol.—Anat. and Phys.	Senior Schol.—Math. Med. Schol.—Prac. of Midw.
Wednesday, Oct. 23.	9—12			Med. Schol.—Prac. Chem.	Senior Schol.—Nat. Phil. Med. Schol.—Prac. of Med.
	2—5	Liter., Med. } Schol.—English.	Engin. Schol.—Exp. Phys.	Engin. Schol.—Nat. Phil.	Senior Schol.—Nat. Phil.
Thursday, Oct. 24.	9—12	Liter., Med. } Schol.—Latin.	Liter. Schol.—Latin. Engin. Schol.—Geo. Draw.	Engin. Schol.—C. Engin. Med. Schol.—Mat. Med.	Med. Schol.—Med. Jur. Senior Schol.—Pol. Econ.
	2—5	Liter., Med. } Schol.—Latin.	Liter. Schol.—Latin. Engin. Schol.—Geo. Draw.	Engin. Schol.—C. Engin.	Senior Schol.—Pol. Econ. Med. Schol.—Surg. Anat.
Friday, Oct. 25.	9—12	Liter., Med. } Schol.—Greek.	Liter. Schol.—Mod. Lang.		Senior Schol.—Mod. Lang. Senior Schol.—Metaph. Med. Schol.—Anatomy.
	2—5	Liter., Med. } Schol.—Greek.	Liter. Schol.—Mod. Lang.		Senior Schol.—Mod. Lang. Senior Schol.—Metaph. Med. Schol.—Physiology.

Students passing the Supplementary Examinations complete the previous year, and take rank accordingly.

Hours of Lectures,—Session 1867-68.

Hours.	Arts.			Civil Engineering.			Medicine.	
	1st Year.	2nd Year.	3rd Year.	1st Year.	2nd Year.	3rd Year.		
9 till 10	*French.* Monday Wednesday Thursday *German.* Tuesday Friday	*Mathematics.* Monday Tuesday Wednesday Thursday Friday		*French.* Monday Wednesday Thursday *German.* Tuesday Friday	*Mathematics.* Monday Tuesday Wednesday Thursday Friday			
10 till 11	*Mathematics.* Monday Tuesday Wednesday Thursday Friday	*French.* Monday Wednesday Thursday *German.* Tuesday Friday	*Honor Classes.*	*Mathematics.* Monday Tuesday Wednesday Thursday Friday				
11 till 12	*Latin.* Monday Wednesday Friday	*Nat. Philos.* *Exp. Phys.* Monday Wednesday Friday *Mat. Phys.* Tuesday Thursday	*Eng. Lit.* Monday Wednesday Friday *History.* Tuesday Thursday	*Exp. Phys.* Monday Wednesday Friday *Geom. Drawing.* Tuesday Thursday	*Mineralogy and Geology.* Monday Wednesday Friday *Mat. Phys.* Tuesday Thursday	*Office and Field Work.* Tuesday Thursday	*Exp. Phys. 3 months.* Monday Wednesday Friday	*Prac. Chem. [see below.* Summer Medical Classes.]
12 till 1	*Greek.* Monday Thursday Friday	*Latin.* Monday Wednesday Friday	*Metaphysics.* Tuesday Wednesday Thursday Friday *History.* Monday	*Geom. Drawing, and Office Work.* Tuesday Thursday	*Office and Field Work.* Tuesday Thursday	*Office and Field Work.* Tuesday Thursday	*Anatomical Demonstrations.* Monday Tuesday Wednesday Thursday Friday	

1 till 2		*Greek.* Monday Thursday Friday	*Zool. to Mar.* 1. Monday Tuesday Wednesday Friday *Bot. from May* 1. Monday Tuesday Wednesday Thursday Friday		*Civil Eng.* Monday Wednesday	*Nat. Philos. applied.* Tuesday Thursday	*Zool. to Mar.* 1. Monday Tuesday Wednesday Friday	*Bot. from May* 1. Monday Tuesday Wednesday Thursday Friday
2 till 3	*English.* Monday Tuesday Wednesday Friday	*Logic.* Tuesday Wednesday Thursday Friday	*Pol. Economy.* Tuesday Thursday Friday			*Civil and Mech. Eng.* Monday Wednesday		
3 till 4			*Chemistry.* Monday Tuesday Wednesday Thursday Friday	*Chemistry.* Monday Tuesday Wednesday Thursday Friday	Field Work and Engineering Excursions and additional Lectures for 2nd and 3rd Year Students occasionally on Fridays and Saturdays for some hours.			*Chemistry.* Mon. Tues. Wed. Thur. Fri. *after May* 1, *from* 2 *till* 3.
4 till 5			Chemical Laboratory open from 9, A.M., till 3, P.M.					*French.* Monday Thursday or from 9-10, A.M.

Surgery. Monday Tuesday Wednesday Thursday	*Med. Juris.* Friday		
Anatomy. Monday Tuesday Wednesday Thursday Friday	Examination on Fridays at 4 o'clock.		
Midwifery. Monday Tuesday Thursday	*Medical Jurisprud.* Wednesday		
Materia Med. Monday Tuesday Wednesday Thursday	*Prac. Med.* Monday Tuesday Wednesday Thursday		

SUMMER MEDICAL CLASSES, COMMENCING MAY 1, 1867.

Practical Chemistry, ... Monday, Tuesday, Wednesday, Thursday, Friday, from 11 A.M.
Botany, ... Monday, Tuesday, Wednesday, Thursday, Friday, 1 P.M.
Experimental Physics, ... Monday, Wednesday, Friday, 2 o'clock; Tuesday, Thursday, 11 A.M.

FACULTY OF LAW.—HOURS OF LECTURES.

1st Year.			2nd Year.			3rd Year.		4th Year.				
6 o'clock, P.M.	*Law of Property.* Monday Wednesday Friday	7 o'clock, P.M. *Jurisprudence.* Monday Wednesday Friday	7 o'clock, P.M.	*Equity and Bankruptcy.* Monday Wednesday Friday	8 o'clock, P.M. *Civil Law.* Monday Wednesday Friday	11 o'clock, A.M.	*Common and Criminal Law.* Tuesday Thursday Saturday	10 o'clock, A.M.	*Evidence and Pleading.* Tuesday Thursday Saturday	6 o'clock, P.M.	*Constitutional & Colonial Law.* Monday Wednesday Friday	1&30 o'clock, P.M. *Medical Jurisprudence.* Wednesday, 3 o'clock Friday, 1 o'clock

APPENDIX, No. 7.

Appendix, No. 7.

An Enlarged Digest of Subjects and Courses pursued in Queen's College, Belfast.

Digest of Subjects and Courses.

Greek—*Professor, Charles MacDouall*, LL.D., M.R.A.S.

In the Greek Class, as in all those which are attended during more than one session, the business, as well as the hours assigned to the Students of the different years, is necessarily different; but it is always distributed into three simultaneous processes, viz., public examinations, lectures more or less formal, and exercises written at home and commented on in the class.

In the first session, the complex and self-contained structure of the Greek language is subjected to a close analysis; carried out, on the one hand, by tracing words to their crude forms, by classifying terminations, both the primary and the flexional, and by discriminating among analogically correct forms those actually used in different ages and dialects; on the other hand, by exhibiting the methods by which words are combined in simple clauses, clauses are knit into sentences, and sentences compose periods less or more complicated. Some prose-work furnishes the materials for this analysis; while the Students read and translate it, or else re-translate off-hand passages read out in English before them by the Professor. Besides syntactical phænomena, the laws and characteristics of both epic and dramatic versification are expounded and exemplified, while a portion of the *Ilias* and some tragedy are used as text-books.

In the second session, while consecutive passages of Herodotus along with some Attic oration or philosophical treatise, and a portion of the *Odysseia* along with some Attic tragedy or comedy, form the basis of prelections, the previous discipline is continued and extended; the distinctions of dialect and style are more fully elucidated; the origin, growth, and fortunes of the epos, the drama, history, and other departments of literature, are more distinctly unfolded; discussions on points of mythology, geography, chronology, archæology, æsthetics, &c., are more freely introduced and more amply treated. The Students are required to turn Herodotean Greek, at sight, into Attic, altering both the forms of words and the structure of sentences; to re-translate passages into Greek prose and verse; and also to give in original essays in both forms of composition.

Considering the variety of subjects which enter simultaneously into the first and second Sessions of the Collegiate Course, the Students generally appear to give a fair share of their attention to the Greek Language and Literature. Several times in the week a considerable number voluntarily attend extra Lectures, at which no note is taken of their presence or of their absence.

In a distinct or higher class, advanced Students, generally in the third or fourth year of their Course, are exercised in the study of more difficult works than those previously read, in the higher problems of criticism and philology, and especially in composing both prose and verse.

The following Text-books have been used in the successive Sessions of College from 1849–50 to 1865–66:—*The Ilias*—all the Books except I., II., IV., V., VII., VIII.; *the Odysseia*, Books I. to XIV. (inclusive); Hesiodus, *Theogonia;* Pindarus, *Olympia*, *Pythia*, *Nemea;* Aeschylus, all the Tragedies except the *Supplices;* Sophocles, the seven Tragedies; Euripides, *Alcestis*, *Hippolytus*, *Hecabe*, *Phoenissae*, *Orestes*, *Helene*, *Hercules Furens*, *Bacchae*, *Ion*, *Rhesus*, *Troades*, *Andromache*, *Iphigenia in Aulide*, *Iphigenia in Tauris;* Aristophanes, *Nubes*, *Aves*, *Ranae;* Herodotus, Books I., II., III., IV., VII.; Thucydides, Books I., II.; Xenophon, Portions of *Anabasis* and *Cyropaedeia:* Platon, *Apologia Socratis*, *Gorgias*, *Phaedon*, *Phaedrus*, *Philebus*, *Protagoras*, *Theaetetus*, *Timaeus*, and Books I., VII., and X. of *Respublica;* Aristoteles, *Poetica* and portions of *Rhetorica;* Demosthenes, *c. Meidiam* and *de Corona;* Aeschines, *in Ctesiphontem.*

The Sanskrit and Hindustani Classes, conducted during six Sessions by the Professor of Greek, have been discontinued.

LATIN—*Professor, William Nesbitt,* M.A.

The Professor of Latin lectures Students of the First and Second Years each set three hours a week; attendance on the lectures being compulsory for those who take the Classes of Latin. Besides these compulsory lectures, he gives two lectures additional to Students of each of these years, attendance on which is voluntary, in which more difficult authors are read, and special attention is paid to composition. The attendance on these lectures is very good.

An honor Class has been formed of Students of the Third and Fourth Years, chiefly attended by those who are anxious to distinguish themselves in Ancient Classics at the Degree Examination.

In addition to the above, two lectures are delivered weekly on Latin composition.

The number of hours during which the Professor lectures each week is fourteen.

HISTORY AND ENGLISH LITERATURE—*Professor, Charles Duke Yonge,* A.B. Oxon.

Class of the English Language.

The business of this Class is conducted by—

A Course of Lectures on the Origin, Formation, Inflections, and Grammar of the English Language, for which Dr. Latham's "English Language" forms in some degree the text-book;

With occasional Lectures on the rules and principles of Prose Composition, and Weekly Essays.

Class of English Literature.

The business of this Class is conducted by—

A Course of Lectures on English Literature in general, and particularly on the lives, works, and styles of the best authors in each department;

With Special Lectures also on the works appointed as the subjects for the Dublin Autumnal Examination of the ensuing year, with and without Honors;

And Fortnightly Essays.

Class of History.

The business of this class is conducted by—

Lectures on History in general;

Lectures on English History, embracing rather the larger half of the entire course;

A subsequent course on the History or that portion of the History of any other country which is selected as a subject for the Dublin Autumnal Examination of the ensuing year.

MODERN LANGUAGES—*Professor, Albert Ludwig Meissner,* PH.D.

The instruction in Modern Continental Languages embraces three courses each for French and German, extending over three terms, and a course of Italian during the first term, attendance on which is voluntary.

No entrance examination is as yet held in Modern Languages, in consequence of which the insufficiency of intermediate teaching is more apparent in this department than perhaps in any other.

Students in Arts and Medicine, and in the department of Engineering, are required to attend lectures on one Modern Language for one session. The majority select for this purpose the French language; several, however, attend both French and German. For Students in Arts of the second and higher years, Modern Languages form one in a group of four subjects, out of which they select two.

The work of the classes, especially during the first two years, is carried on to a great extent by means of *viva voce* questions and answers. Frequent oral examinations are held, and at each meeting of the classes a passage is translated from English into French or German.

Appendix, No. 7.

Digest of Subjects and Courses.

In the First Session the Grammar is explained, and select passages are translated from French and German Classics.

In the Second Session a more extended course of the Grammar is gone through, and the Students are made acquainted with the principal authors of French and German Literature.

The first term of the Third Session is devoted to a repetition of the two preceding courses, together with Examinations on the History of French and German Literature. The Text-books are Géruzey and Demogeot for French, and Weber and Vilmar for German. The questions and answers are given and returned in French and German respectively.

In the second term of the Third Session the Professor delivers Lectures in French and German on those periods of Literature with which the Students have already become somewhat familiarized by their previous studies.

In the third term of the Third Session the work of the second is continued, and occasional Lectures are delivered on the principles of Comparative Grammar.

Medical Students unable to attend the classes in Arts, are instructed in a separate class.

About six per cent. of the Students attending Lectures on Modern Languages are Non-Matriculated.

MATHEMATICS—*Professor, John Purser,* M.A.

Attendance on this Class is prescribed to all Students in the Faculty of Arts during the first year of their Course; during the second year Mathematics forms one of four Courses, out of which the Students select two.

All Students in the Department of Engineering are required to attend the Mathematical Classes during two years.

Before entering, Students are required to pass an examination in the First and Second Books of Euclid, and in a small portion of Algebra. Practically they come fairly prepared in the prescribed portions of Euclid, but a large proportion can hardly be said to possess even an elementary knowledge of Algebra. A considerable number of the Students are Candidates for Mathematical Scholarships at entrance, and these are generally well prepared in the first six Books of Euclid, and a considerable portion of Algebra and Plane Trigonometry.

On this account the instruction of the First Year in Mathematics has been given in two Divisions. The Lower Division has been carefully taken through such portions of Euclid I., II., III., IV., VI., as they had not previously prepared, and has received instructions in Algebra as far as the progressions, and in Plane Trigonometry as far as the solution of triangles, with the use of logarithms and trigonometrical tables. The instruction of the Upper Division comprises a complete Course of Algebra and Trigonometry, with the principal historical properties of the Conic Sections, treated geometrically.

The Council has sanctioned the employment of the Senior Mathematical Scholar in giving a portion of the instruction of the Lower Division. This arrangement, while it affords a greater number of hours to the Lower Division, enables the Professor of Mathematics to give more attention to the Upper Division, and has been found to work very satisfactorily.

In the Second Year the subjects of Lecture are Analytical Geometry, the Differential and Integral Calculus, and the first three sections of the Principia of Newton; and, in addition to this, when the progress of the Students has been sufficiently rapid during the early part of the Session, The Theory of Equations, and the solution of the simpler kinds of Differential Equations.

For several years past a third and higher class has been formed for the benefit of the Students competing for University honors and the Indian Civil Service Examinations. The subjects of lecture are Geometry of three dimensions, Differential Equations, and other branches of the higher Mathematics, according to the advance which the Students have made.

NATURAL PHILOSOPHY—*Professor, Joseph David Everett,* M.A., D.C.L.

The Classes in this Department are arranged under the three heads of Experimental Physics, Mathematical Physics, and Natural Philosophy Applied.

All Students in the Faculty of Arts in their Second Year attend the Classes of Experimental and Mathematical Physics. Engineering Students attend the Class of Experimental Physics in their First Year, the Class of Mathematical Physics in their Second Year, and the Class of Natural Philosophy Applied in their Third year. Medical Students attend the Class of Experimental Physics only.

In all these Classes the teaching is by prelection interspersed with oral examination.

The subjects treated under the head of Experimental Physics include—Properties of Matter, Mechanical Powers, the Elements of Hydrostatics and Hydraulics, Heat, Light, Sound, Electricity, and Magnetism; the leading principles in these several departments being broadly laid down and copiously illustrated by experiments.

The Course of Mathematical Physics includes a rigorous demonstration of the principal theorems in Statics and Kinetics, an explanation of the leading principles of Astronomy, Geometrical Optics, and the Mathematical treatment of numerous questions connected with the subjects of the Experimental course.

In the Class of Natural Philosophy Applied, the subjects include a more advanced course of Statics, Kinetics, and Hydrostatics, involving application of the Differential and Integral Calculus, and illustrated by practical examples, Kinematics, including the principles of Mechanism, the relations of Stresses and Strains, Moduli of Elasticity and Rigidity, Work Done, Kinetic and Potential Energy, Elements of Thermodynamics.

In addition to the above-named Classes, there is an Honor Class, attended by Senior Students, in which the subjects prescribed for University Honors are studied.

CHEMISTRY—*Professor, Thomas Andrews,* M.D., F.R.S., M.R.I.A.

In the Class of Chemistry the greater part of the Course is devoted to pure Chemistry; but the Elements of the Sciences of Heat and Electricity, particularly in their relations with Chemistry Proper, are also taught. The application of these sciences to the arts are particularly referred to; and it has been the constant endeavour of the Professor to communicate to the Students as precise and accurate information as possible on the subjects treated in his Lectures, and to train them to habits of careful observation and accurate thinking. With this view a weekly examination of the whole Class is held, at which the Students are subjected to a searching examination on the business of the preceding week; and further to encourage a taste for scientific inquiry, and also to train a certain number of practical chemists, a limited number of the Students are admitted, by examination, as working pupils into the chemical laboratory, where they have an opportunity of acquiring a knowledge of chemical analysis. This latter arrangement has now been in practice for several years, and has been attended with the best results.

NATURAL HISTORY—*Professor, Wyville Thomson,* LL.D.

The Zoological Department of the Course occupies the First Term and greater part of the Second, and comprehends the Outlines of Anatomy and Physiology of animals, followed by Systematic Zoology, and remarks on the distribution of animals.

The Botanical part comprehends Vegetable Anatomy and Physiology, Systematic Botany, and distribution of vegetable forms. In addition to the Class Lectures, meetings are held in the Botanic Garden, and practical excursions made into the neighbouring country.

This Course comprehends chiefly Lectures on the structure and form of continents and islands; the distribution of mountain systems, rivers, and lakes; the ocean, its currents, temperature, &c.; the atmosphere, its currents, &c.; rain, snow, &c. The preceding subjects are considered in relation to the geographical distribution of animals and plants.

These different branches are illustrated by specimens, or drawings, or both, as the case may be.

Appendix, No. 7.

Digest of Subjects and Courses.

GEOLOGY AND MINERALOGY—*Professor, Wyville Thomson,* LL.D.

The Courses consist of lectures, demonstrations, and examinations. The Geological Course embraces the general principles of the science, and a detailed investigation of the palæontological, lithological, and economic characters of all the formations. The Students are exercised in the practical use of the necessary instruments, and in the construction of Geological maps and working sections. The characteristic fossils of the different formations are rendered familiar by the exhibition of specimens and models, and an excellent series of drawings. Drawings are also used for the illustration of the underground workings of mines of copper, coal, &c.

In the Mineralogical Course the Students are instructed in the most modern crystallography by models, and exercised with the reflecting goniometer. The electro-chemical classification of minerals is then explained, and an extensive suite of minerals in the Museum is arranged on that system, for the instruction of the Students.

Once a week examinations are held, and additional explanations given of the subjects of the preceding lectures.

LOGIC AND METAPHYSICS—*Professor, Rev. James M'Cosh,* LL.D.

LOGIC.

Students attend this Class four days each week during twelve weeks of the Second Session. On two of these days there are examinations on a text-book of Formal Logic, with short prelections on the said text-book, and also the oral explanation of philosophic terms, the reading of Essays by the Students, and the criticism of them by the Professor. On the other two days the Professor delivers written Lectures. This Course of Lectures is divided into two parts: FIRST, GENERAL LOGIC, or an Exposition of the Laws of Discursive Thought in general, that is, whatever be the object of thought, embracing Notions, Judgment, and Reasoning; SECONDLY, PARTICULAR LOGIC, or the Development of the Laws of Thought, as directed to particular classes of objects, comprising Demonstrative Evidence, Probable Evidence, Induction, Analogy, Teleology, and the Relation of the Organon of Bacon to that of Aristotle. The prominent topic in the second part is the Method of Induction, which is treated under the heads:—I. The Means, being generally Systematic Observation, and more particularly Analysis, Observation Proper, Experiment, Hypothesis, Explication of the Conception. II. The End, being the Discovery of Classes (as in Natural History, &c.), of Composition (as in Chemistry, &c.), or Causes (as in Natural Philosophy, &c.). III. The Canons of Classes, Composition, and Causes by which we may reach the End by the Means. The Students are required to give in a short written essay once a fortnight. At the Pass Examination, at the close, about one-half of the questions bear upon subjects discussed in the text-book, and the other half upon topics explained in the lectures.

METAPHYSICS.

This Class meets four days each week, and an hour each day, during the first two terms of the Session, and is attended by Students of the Third Year. On one of these days there is a rigid examination, with interspersed remarks by the Professor, on the second half of the Epitome of the History of Philosophy, sanctioned by the University of France (translated by Henry). In this part of the text-book there is an abstract of the doctrines of the more eminent philosophers who have flourished in this country, and on the Continent of Europe, from the time of Bacon to the present day. On another of these days there is an examination on the written lectures, together with the reading and criticism of essays; the Students being required to give in a carefully written essay every fortnight to the Professor, who reads it at home, and selects certain portions of it to be

read in the class, where he criticises it. These essays are on the leading subjects discussed in the written lectures. On the other two days the Professor delivers carefully prepared written lectures. He begins the course with a few lectures on the Method of Investigation, which is that of Induction, and on Mind and Body, and then proceeds to divide his course into two parts, PSYCHOLOGY and METAPHYSICS PROPER.

Under PSYCHOLOGY he treats of the Powers or Faculties of the Mind which he classifies as follows:—I. The Simple Cognitive Faculties: (*a*) Perception; (*b*) Consciousness. II. The Reproductive Faculties: (*a*) Retention; (*b*) Phantasy; (*c*) Association; (*d*) Recognition; (*e*) Composition; (*f*) Symbolic Power. III. The Faculties which Discover Relations: (*a*) of Identity and Difference; (*b*) of Whole and Parts (to which we owe abstractions); (*c*) of Space; (*d*) of Time; (*e*) of Quantity; (*f*) of Resemblance (to which we owe the Discovery of Classes); (*g*) of Active Property; and (*h*) of Cause and Effect. IV. The Conscience. V. The Emotions; and VI. The Will. In this course of lectures, which occupies two-thirds of the session, the method of operation and peculiarities of these mental attributes are carefully pointed out.

Under METAPHYSICS PROPER the Professor treats of the Native or Intuitive Principles of the Mind. He points out their true Psychological Nature, and shows that they are the fundamental laws or rules of the Faculties. He also specifies the tests, such as Self-evidence, Necessity, and Universality, by which they may be distinguished. He proves that they are in the constitution of the mind, and that they operate spontaneously, but that we can make a reflective or philosophic use of them only after we have detected their nature by a careful induction. He classifies them as the True and the Morally Good. Under the first he treats (1) of Primitive Cognitions and Beliefs, such as Body, Spirit, Substance, Power, Space, Time, the Infinite; and (2) Primitive Judgment, such as Substance and Quality, Mathematical Axioms, Cause and Effect. Under the Good, without entering into the subject of Ethics, he shows that there is a fundamental distinction between Moral Good and Evil. He closes this course by showing how all these principles should conduct us to the belief in a Being who is at one and the same time the True and the Good.

HONOR LOGIC.

The Professor has also an Honor Class, in which are discussed the higher questions of Logic (Formal and Inductive) and Philosophy. It meets three times a week, and is attended by twenty-two Students. At two of the hours the Professor lectures on Logic and the History of Philosophy, and at the third hour there are examinations on text-books (including logical treatises by Mansel, Thomson, and Mill), and discussions.

CIVIL ENGINEERING—*Professor, James Thomson*, M.A., C.E.

The Courses of lectures and practical instruction given by the Professor of Civil Engineering are arranged to accord with the Ordinances of the Queen's University, which prescribe to candidates for the Diploma in Civil Engineering a Curriculum extending over three Sessions usually, but admitting of abbreviation to two Sessions in the case of students whose previous acquaintance with a sufficient group of the subjects prescribed for study in the first and second Sessions of the ordinary Course shall be deemed by the College Council satisfactory.

For the First Year Students the Professor gives a course of instruction, comprising lectures and oral examinations on the Principles of Geometrical Drawing, and the performance by the students of practical work under his direction. The lectures include the principles of descriptive geometry, orthographic and isometric projection, and linear perspective; and the practical work comprises the performance of examples in these subjects, and the execution of drawings in Mechanical Engineering, and occasionally also in Architecture and Civil Engineering. The Class meets for two hours at a time on two days per week during the three Terms of the College Session.

For the Second Year Students two courses are conducted by the Professor of Engineering, of which one is a Lecture Course and the other a Practice Course. The Lecture Course comprises surveying, levelling, and plotting, with the theory

Appendix, No. 7.

Digest of Subjects and Courses.

and use of the instruments required in surveying and levelling operations; mensuration of earthworks for railways; setting out works on the ground, including ranging of railway curves, and setting out breadths of cuttings and embankments, and ranging tunnels, &c. The Course also comprises usually some of the following subjects:—revision and farther prosecution of descriptive geometry, and perspective, and other subjects of geometrical drawing; designing and drawing of oblique bridges; properties and qualities of materials used in construction, and modes of procuring them; and an introduction to architecture as a fine art.

In the Practice Course of the Second Year the Students are engaged in the performance of office and field work, under the instruction and direction of the Professor; and the business includes surveying, levelling, drawing, mapping, and the computation of areas of lands, and other engineering calculations. Excursions are also made occasionally during the Session to visit Engineering works.

For the Third Year Students there are (as for those of the Second Year), two Courses conducted by the Professor, one a Lecture Course, and the other a Practice Course. The Lecture Course comprises the farther treatment of some of the subjects proposed to be entered on in the Second Year, and most of the following subjects:—foundations, cofferdams, bridges, tunnels, roads, and railways; specifications for engineering contracts; water-works for supplying towns; science of the flow of water in orifices, pipes, and canals; drainage of fens by gravitation, and by steam power and other mechanical means; harbours; regulation and improvement of rivers; science of the strength of materials and structures; ventilation of dwelling-houses, public buildings, and mines; the iron manufacture; processes and mechanisms used in foundries and engineering workshops.

The Practice Course includes office work, field work, and engineering excursions.

ANATOMY AND PHYSIOLOGY—*Professor, Peter Redfern,* M.D. Lond., F.R.C.S.

The Department of Anatomy and Physiology comprises two distinct Courses of Lectures—one on Anatomy and Physiology, the other on Descriptive and Surgical Anatomy, and also the teaching of Anatomy by Dissections throughout the day.

The Course of Anatomy and Physiology includes about 144 meetings, each of an hour's duration, held on the first five days of each week from November to April inclusive. These meetings are for lecture and occasional examinations on the subjects previously considered in the lectures. The lectures include a complete course of the Anatomy and Physiology of the general textures of the body, including the blood, chyle, &c., and a systematic account of the whole of the viscera, treated of as they are associated in groups for the several purposes of digestion, circulation, respiration, urination, innervation, and generation; also the organs of sense. In treating of every part or organ its healthy state is shown by recent dissections and by preparations from the Museum illustrating it in man and animals, its diseased states and actions being referred to at the same time and contrasted with the healthy ones. The textures not visible to the naked eye are shown under a series of achromatic microscopes, so that during the Course every student in the class has an opportunity of judging for himself of the true characters of each part, and, by becoming familiarized with these, of recognising each when changed by disease.

The Course of Practical Anatomy and Anatomical Demonstrations includes:—

1st. Dissections carried on throughout the day under the immediate superintendence of the Professor of Anatomy and Physiology, and the Demonstrator. Each Student is required to be steadily engaged in dissections during the whole Session. For this purpose the supply of subjects is regular and abundant, and thus affords the surest foundation for efficient medical teaching.

2nd. This Course includes the Anatomical Demonstrations, which consist of a complete Course of Descriptive and Surgical Anatomy, commencing with the anatomy of the skeleton and bones, and including the anatomy of the limbs and other parts, excluding that of the viscera and the physiology treated of in the Course of Anatomy and Physiology. The demonstrations are given on each of the first five days of the week, and are about 117 in number in each Session.

PRACTICE OF MEDICINE—*Professor, James Cuming,* M.D.

The class meets four times each week, from the first week of November to the last of the following April.

An examination is held usually once a fortnight. The Course embraces the principles of Inflammation, Fevers, the diseases, organic and functional, of the viscera of the three great cavities of the human body. In treating of individual diseases, their pathology, semeiology, ætiology, and treatment, are the subjects chiefly dwelt on. Wherever it is possible, pathology is illustrated by the preparations afforded by our Museum, by drawings and plates, or by recent specimens. It may be added that the Professor's present connexion with the Belfast General Hospital adds greatly to the means of making his Course more useful and interesting to students.

THEORY AND PRACTICE OF SURGERY—*Professor, Alexander Gordon,* M.D.

Four Lectures are delivered weekly during the Medical Session. An examination is held each day on the subject of the preceding day's Lecture. Each Course comprises the following subjects:—

Inflammation,
Suppuration,
Mortification,
Erysipelas,
Burns,
Ulcers,
Wounds,
Hæmorrhage,
Diseases of the Arteries,
,, Veins,
Fractures of Trunk and Extremities,
,, Cranium, Injuries of the Brain and Scalp,
Dislocations,
Diseases of the Joints,
Diseases of the Bursae,
,, Bone, benign and malignant,
,, the Jaws and Mouth,
,, the Fingers and Toes,
,, Female Breast,
,, Anus and Rectum,
,, Testis,
,, Hernia,
,, Prostate,
,, Bladder,
,, Eyes,
,, Larynx,
Syphilis,
Gonorrhœa,
Stricture.

All the capital and minor operations are performed on the dead subject. The Professor delivers a separate Course of twenty-five Lectures on Operative Surgery.

MATERIA MEDICA—*Professor, James Seaton Reid,* M.D.

This Course includes—

1st. General Pharmacology, or the modes in which medicines act upon the living organism in a state of health.

2nd. Therapeutics, or the modes in which medicines act as curative agents.

3rd. Pharmacy.

4th. Dietetics, a review of the different kinds of food used in health and in disease.

5th. Special Pharmacology, or the history, composition, uses, and modes of administering medicinal agents for the cure of disease.

The Class meets four times each week. An examination is held once every week.

Appendix, No. 7.

Digest of Subjects and Courses.

MIDWIFERY—*Professor, Richard F. Dill,* M.D.

Lectures four times a week during the six winter months consist of following subjects:—

Anatomy of the pelvis, so much as is required for midwifery. Its measurement and pelvimeters.

Contents of the pelvis. The functions of the uterus in its virgin state.

Conception—length of gestation—changes of the uterus and its appendages during gestation.

Growth of child from its earliest seen form until its full parasitic size.

Graafian vesicle and corpus luteum. Fœtus, its circulation, signs of maturity, weight, and length.

Plural births.

Proportion of births and deaths of males to females.

Superfœtation.

Signs of pregnancy.

Signs of approaching labour.

Natural labour, its progress; also the positions and progress of child till its separation from its mother.

Management of natural labour, including the arrangement of the bed and bed-room, and the proper dress and posture of the patient.

Tedious labour, its causes and treatment.

Labour requiring the use of instruments; their application taught on models in the class.

Cæsarean section and Sequltean operation—how to prevent the fœtus from getting large in uterus.

Premature labour—how to bring it on, and when it is necessary to do so.

Cross-births and their treatment.

Abortion—how to prevent it.

Extra uterine fœtations—how they occur, and their treatment.

Management of women after delivery, and treatment of such accidents and diseases as occur at this period.

Management of children after birth, washing, dressing, food, &c., and the choice of a wet-nurse, and treatment of such accidents as take place at this period, or soon after.

Practical midwifery taught by pupils attending patients in their own houses and in the Lying-in hospital, where Clinical Lectures are given.

MEDICAL JURISPRUDENCE—*Professor, Dr. Hodges.*

The Lectures in this Course are delivered twice weekly during six months. They include an account of the history and chemical investigation of poisons, and of the various subjects respecting which the evidence and assistance of Medical Practitioners may be required in Courts of Law. Experimental illustrations of the methods to be pursued in medico-legal inquiries are given, and frequent examinations held to test the progress of Students. No salary has been allocated to the Teacher of this department, and the duties, at the request of the Council, have, since the opening of the College, been performed by Dr. Hodges.

ENGLISH LAW—*Professor, Echlin Molyneux,* Q.C.

The Professor of English Law, in conducting his department, has constantly kept in view the object of the Select Committee of the House of Commons in recommending the foundation of Chairs in Law in connexion with the Queen's Colleges, which, as they stated in their Report on Legal Education, was not merely to prepare Candidates for the Bar, and for the profession of Attorney and Solicitor, but to raise the standard of legal attainments amongst local practitioners, and especially to provide opportunities of legal education to qualify persons intended to fill administrative situations not strictly legal—a policy which has

been since followed up by the Legislature conferring privileges, by way of inducement, on Candidates for the profession of Attorney and Solicitor, who shall avail themselves of these Schools of Law. *Appendix, No. 7.*

Digest of Subjects and Courses.

The Course of the *First* year in this department comprehends the elements of real and personal property, with the principles of conveyancing; that of the *Second* consists of an introduction to the principles and practice of Courts of Equity and the law of Bankruptcy; the *Third* Course includes the common law as incident to contracts, the nature and form of remedies by civil action, and an outline of criminal law, theoretical and administrative, which last completes the Curriculum of instruction required for the attainment of the Diploma of Elementary Law in the Queen's University. The subjects prescribed for Students of the *Fourth* year to qualify them for the Degree of LL.B. embrace a more extended and detailed course of the subjects already enumerated, including the law of wills, powers, evidence, and procedure.

The Lectures are made auxiliary to the cotemporaneous studies directed, and are accompanied by interrogation, independent of the General Examination and that for Honors. Such books, cases, and decisions, and portions of treatises are pointed out for reading as are considered by the Professor most useful in elucidating a branch of learning which is scarcely furnished with books exclusively intended for instruction; and no efforts have been spared to point out the peculiarities of the law in Ireland, whether proceeding from statutes or inherent diversity of practice, or to direct attention to the recent changes which have been introduced into the course of procedure.

From the first opening of the College to the present time the successive classes have spontaneously applied themselves with assiduity and perseverance to the various subjects of legal instruction, and several Non-Matriculated Students have from time to time availed themselves of the privilege afforded by the College Ordinances of attending detached Courses of the Lectures on selected subjects.

Under these circumstances, the Professor is gratified at being able to give the assurance that the Faculty of Law has fully realized the objects of its founders, and that a further extension of its public benefits would ensue upon the adoption by Government of the suggestion made by the same Committee of the House of Commons that a preference should be given to candidates for situations in the Civil Service, not of a purely legal nature, who could produce testimonials of legal attainments from those institutions—a rule which would fully accord with the principle laid down in a recent report of another Committee in relation to the Civil Service.

JURISPRUDENCE AND POLITICAL ECONOMY—*Professor, T. E. Cliffe Leslie*, LL.B.

The subjects embraced in the Course of Lectures on *Jurisprudence* are according to the regulations of this College, (1) the Elements of Jurisprudence, (2) Civil Law, (3) Constitutional Law, (4) Colonial and International Law.

In the treatment of these subjects both the *Historical* and *Philosophical* Methods are followed in the Lectures of the Professor. The Historical Method, for example, is applied in tracing the principal changes through which the laws of England have passed, the assignable causes of such changes, and the degree and manner in which, in comparison with the laws of Continental Europe, the laws of this kingdom have been affected by contact with the principles of Roman legislation. The method of Philosophical Analysis, on the other hand, is applied in investigating the doctrines of the foundation and classification of rights, the several parts and legitimate form of a complete code, the relation of Scientific Jurisprudence to other departments of Social Philosophy, and the means of improving the state of Positive Law as deducible from such considerations.

The subjects which a Course of Lectures on *Political Economy* must embrace are fewer and more definite than those classed under the less advanced and more complicated Science of Jurisprudence. It is the Professor's endeavour to illustrate the principles of Economic Science by the help of those practical applications which will be most interesting and useful in a large commercial town.

Appendix, No. 8.

General Class Examination.

APPENDIX, No. 8.

General Class Examination at the close of the Session 1866-67.

First Year Students.

The English Language.—*Examiner, Professor Yonge.*

1. From what country did the English language chiefly come, and from what other countries did it from time to time receive additions?
2. Give a few words derived from the language of each of these different countries.
3. What are the most remarkable differences between the English and the languages from which it is derived, in the inflection of words, whether verbs or nouns?
4. In English nouns, in what points do substantives and adjectives differ in inflection? Are there any exceptions, or apparent exceptions, to the general rule?
5. How many divisions of pronouns are there? Illustrate the answer by examples.
6. How do verbs form their preterites? Give examples of the different modes, and mention any classes into which verbs have been divided by grammarians in reference to those different modes.
7. What is the derivation and meaning of the word Syntax? To what does it relate?
8. What is the rule of construction in a case where the nominative case to the verb is a noun of multitude?
9. Give the three rules which Dr. Latham lays down with respect to "the concord of numbers" in the case of verbs and their nominative cases, with examples.
10. Distinguish between the uses of *shall* and *will*.
11. Give a list of a few of the principal auxiliary verbs, and explain the construction when they are followed by other verbs.
12. What is meant by the succession of tenses? Complete the sentences—

I do this that .....
I did this that .....
I will do this that .....
I have done this that .....

Third Year Arts Students.

Political Economy.—*Examiner, Professor Leslie.*

1. State the four Elementary Propositions of Political Economy, as Mr. Senior lays them down.
2. What proof does he give of the fourth of those propositions?
3. What is the connexion between the fourth proposition and the doctrine of land-rent?
4. By what cause is the average price of agricultural produce regulated, and why?
5. By what cause is the average price of most other things regulated, and why?
6. The relative value of things produced in different countries depends not on their cost of production, but on supply and demand. Explain this.
7. By a Law of Supply and Demand, some persons mean that demand regulates supply, and supply accords with demand, so that there is, on the average, just such a supply of things as consumers want most, and can pay the cost of:—

(1.) Show the truth of this law as regards things of which there is no monopoly.
(2.) Show the fallacy of applying it to things strictly limited in supply—for example, houses for the poor in towns.

8. Mr. Mill says that the price of things limited in supply is the price at which demand and supply become equal. Explain his meaning.

9. Show that in some cases of limited supply, the demand may exceed the supply at the market price, so that Mr. Mill's proposition requires qualification.

10. Does emigration necessarily tend to equalize wages in Ireland and America, or not, and why?

11. Suppose a country contains ten million acres of first-rate land (A); twenty million acres of middling land (B); and forty million acres of very poor land (C):—

(1.) A tithe may begin at once upon cultivating any part of A.

(2.) As soon as it becomes necessary to cultivate any part of B, rent will begin over the whole of A, but not before. Why?

(3.) When will rent begin over B, and increase over A?

(4.) Show from the foregoing, that Mr. Senior's statement, that rent increases faster than a tithe, is incorrect; and that their relative rate of increase depends not on the increase in the amount of agricultural produce alone, but upon the rate at which its cost of production increases.

12. Show the error of Mr. Senior's argument, to prove that absenteeism is not injurious to the labouring class in a country such as England.

13. Explain the different tendency of taxes on raw and manufactured produce respectively, as regards the ultimate effect upon their price.

14. (1.) Explain the meaning of the following statements,—the mint price of 40 lbs. of gold is £1,869; the mint price of an oz. of gold is £3 17*s.* 10½*d.*

(2.) Show that a great fall in the value of gold could not affect the above price of 40 lbs. of gold, but might reduce the price of an oz. of gold below £3 17*s.* 10½*d.*

15. If the new gold mines had not been discovered there would, nevertheless, have been a change in comparative prices in different places. Why?

16. How have the causes which have altered comparative prices in different places affected the distribution and monetary results of the increase in the quality of the precious metals?

GEOLOGY AND ZOOLOGY.—*Examiner, Professor Wyville Thompson.*

GEOLOGY.

1. Describe, and give sketches of, the principal forms of dislocation of stratified rocks.

2. Describe a trap dyke, and describe and explain the effect which is produced by a dyke upon contiguous beds.

3. In what beds, and under what conditions, are mineral veins usually met with?

4. Explain the occurrence of fossils in sedimentary rocks, and their employment as a test of the relative age of beds.

5. What genera of the cephalopoda, the brachiopoda, the crinoidea, and the actinozoa, are most abundant in the mountain limestone?

6. Give the characters of the ganoid fishes, and give a sketch of their distribution in time.

ZOOLOGY.

1. Give the characters of the class mammalia, and distinguish mammals specially from reptiles.

2. Name, and give the leading characters of, two of the most marked forms of the edentata.

3. Explain the structure of the skeleton in the chelonian reptiles.

4. Describe the structure and the mode of attachment of the lower jaw in the five vertebrate classes.

5. Describe the organs of respiration in amphibia and reptiles.

6. Give a sketch of the relations and mode of development of the allantois.

7. Give the essential characters of the sub-kingdoms, annulosa, cœlenterata, echinodermata, and protozoa.

Appendix, No. 8.

General Class Examination.

LAW OF PROPERTY.—*Examiner, Professor Molyneux.*

1. What is the defect, *in point of security*, of a *judgment* registered as a mortgage under the 13 and 14 Vic., chap. 29, as contrasted with a *deed of mortgage* registered in the same office?

2. In what respects does the registration of deeds in Ireland, under the statute of Anne, operate; and how does such registration differ in object and effect from the registration or record of title under the 28 and 29 Vic., chap. 88?

3. When does the statute of limitations, 3 and 4 Wm. IV., begin to run in favour of a tenant at will? And what important change in the law was thereby effected?

4. In the investigation into an abstract of title in fee, of which an estate tail after an estate for life forms one of the links; what facts must be established in support of its validity, so far as that link in the chain of title is concerned?

5. What is the meaning of the expression "title by *purchase*," in relation to the acquisition of title to land? And how does the fact of title being acquired by purchase affect the process of ascertaining the heir at law upon intestacy?

6. Give an instance of words which, in a will, constitute an estate tail, but which have not the same operation in a deed.

7. What is the limit within which an absolute estate in land must vest so as to comply with the rule against perpetuities, and how does an estate tail, which apparently violates the rule, practically fall within that limit?

8. What is the operation of a lease for lives, containing a covenant for perpetual renewal, as recognized in courts of law and equity respectively? And what is the effect of the "Leasehold Conversion Act" in respect of a tenure of that nature? And how does the statute provide against the difficulty, which would ordinarily ensue, in finding an adequate grantor to represent the reversion, and an adequate representative of the original lessee, to accept the grant.

9. What are the rights of the husband in relation to his wife's real estate?

10. What is a base fee?

11. What was the object and effect of the statute of "*Quia Emptores?*"

12. What was the object of the statute "*de donis conditionalibus*," otherwise called the statute of entails, and how has the design of its framers been frustrated?

13. What is a vested remainder?

14. What is the prominent distinction between the development of title to freehold and chattel property, upon the intestacy of the owner, as relates to the persons who legally succeed to such classes of property respectively.

15. What are the statutable exceptions to the maxim, that the right of action for personal wrong dies with the person wronged?

16. What is the difference between general or pecuniary legacies and specific legacies? And how is a deficient fund applied as regards those classes respectively.

17. What is the order or priority in which different classes of debts are payable out of personal assets? And how is a deficient fund administered among creditors standing in equal degree or rank?

18. How does the mode of transferring the legal interest in movables differ from that of chattels real?

19. In what instance do next of kin take "*per capita*," and in what "*per stirpes?*"

20. What are the *statutable* exceptions to the maxim, that rights of action are not assignable? And what exception to the same principle exists at common law?

EQUITY AND BANKRUPTCY.—*Examiner, Professor Molyneux.*

1. State an instance in which Courts of Equity enforce the maxim, "Equality is Equity," when courts of law, in analogous cases, apply a different principle?

2. Give an instance of tacking in equity, and state the principle upon which that practice has been adopted by Courts of Equity. How far, in Ireland, is that practice affected by the Irish Registry Acts?

3. State an instance in which the maxim, "*equitas sequitur legem*" is applied by the court?

4. In what instance is the equitable relief against forfeiture modified by the ejectment acts?

5. What is the relief administered by Courts of Equity in cases of partnership?

6. What renders an equitable mortgage, by deposit of title deeds, a hazardous security?

7. What are the rights and remedies of mortgagees at law and in equity respectively?

8. What are the liabilities of a trustee who invests the trust fund in trade, or any other unauthorized way, with a view to render it productive?

9. Within what branch of equitable jurisdiction does the decision fall, that a renewal of a terminable lease (which is in settlement), obtained by the tenant for life, for his own benefit, will be decreed as a graft upon the original lease for the benefit of persons deriving ulterior rights under the same settlement, which could not have been realized but for the new lease?

10. Testator dies leaving the lands of Blackacre and Whiteacre, together with personal estate. By his will he devises Blackacre, and bequeaths specific and general legacies. He was largely indebted at his death, and his personal assets are not sufficient to pay debts. How and in what order will his general assets be applied?

11. How does the position of a purchaser under the Court of Chancery differ from that of a purchaser under the Landed Estates Court?

12. What is the first question to be decided by the court in a suit by vendor against vendee for specific performance of an alleged contract for the sale of land? What is the primary or interlocutory decree or order made at the hearing, where that question is decided with the plaintiff? And what is the final decree pronounced for the plaintiff or defendant, as the case may be, in the same suit?

13. What are the three facts necessary to justify an adjudication in bankruptcy?

14. By what official act in the progress of the bankruptcy proceedings does the property of the bankrupt become vested in the assignee?

15. What acts of the bankrupt in relation to his property, prior to the petition, are rendered void respectively by the adjudication, and what acts are saved from its operation?

PLEADING, EVIDENCE, WILLS, POWERS, &c.—*Examiner, Professor Molyneux.*

1. What are the proofs preliminary to the admission of secondary evidence of a lost or mislaid document? And what are the preliminary proofs where it is alleged that the instrument is in the possession of the opposite party?

2. When a written agreement has been afterwards varied by parol, what is the mode of proof of the agreement, as so varied?

3. In what case alone is parol evidence of *intention* of the testator admissible where there is neither a patent or latent ambiguity in the will?

4. In what instances are the written statements of deceased persons admissible, although they are not in privity with the immediate subject of litigation?

5. To what averments in the *general* pleadings ought the evidence to be applied, where there have been pleadings *in confession and avoidance?*

6. To what extent can the tribunals of appeal from the superior courts of the common law take cognizance of the subjects of contest?

7. To what respects have wills of realty, and wills of personalty, been assimilated by the statute 7 Wm. IV., and 1 Vict., chap. 26?

8. In what respect has the same statute of wills reversed the presumption which had previously prevailed, in case of the execution of a *power* by *will?*

9. What provisions are contained in the same statute of wills, qualifying the previous law in relation to lapsed devises?

10. Limitation by devise of *freehold* after the words "die without issue;" what was the legal construction of those words before the same statute of wills? And what the construction when the bequest was chattel? And to what extent did that statute alter the law?

11. Will executed before the 1st of January, 1838, in the following words:—"I give and demise the lands of Blackacre to A.B.;" what estate was created in A.B. by that devise? And what would be the effect of the same words in a will executed after that day?

12. Give an instance of a demise by implication.

Appendix, No. 8.

General Class Examination.

13. What effect is given to terms technically legal used in a will? Is the rule of construction universal in that particular?

14. In what cases do Courts of Equity follow the rules of law in the construction of limitations in a deed, although the estates are all equitable? And in what class of cases do they put a more liberal construction upon instruments *inter vivos*, so as to effectuate the intention of the parties?

15. What classes of limitations were introduced under the statute of uses, which were unknown to the common law?

16. What are the several stages of a criminal prosecution?

17. What are the nature and effect of a motion in arrest of judgment?

18. Upon what state of pedigree are the next of kin ascertained "*per stirpes*" and when "*per capita*" in the distribution of personal property of an intestate?

19. What are the necessary proofs to support an action by indorsee of a bill of exchange against indorser?

20. In what respects do trading corporations, joint stock companies, and common law partnerships, differ in their constitution, legal rights, and liabilities?

21. What is the test by which it is to be ascertained whether an appointment, under a power, is within the rules against the creation of perpetuities?

22. Why does a lease for 1,000 years, under a power, operate to that extent, although the donee of the power may be only tenant for life?

23. What is the nature of the statutable remedy provided to give effect to leases under powers defectively exercised?

24. In what instances do Courts of Equity, of their own authority, give relief where powers of appointment have been defectively exercised?

LOGIC.—*Examiner, Dr. M'Cosh.*

1. What is the distinction between the Image or Phantasm of a class, and the Notion of a class, say the class of plants called "lilies"? Is the phantasm adequate? What is involved in the Universal Notion?

2. What is the precise nature of the Generalized Concrete Notion? How is it distinguished from the Singular Concrete, the Abstract, and the Generalized Abstract? How can a Generalized Concrete Notion, say "Man," be defined?

*3. "A country may be overrun by an armed host, but it is only conquered by the establishment of fortresses. Words are the fortresses of thought." Explain what this means. Show that it is true, and give illustrations.

*4. What are the subject and what the predicate in the following?—"All beauty will fade;" "the most sublime act is to set another before thee;" "the eagle lost much time when he submitted to learn of the crow;" "nothing is so easy as to object." Put the first in the various forms of Opposition. Convert the whole four, and explain the nature of Conversion, and the rule which regulates it.

*5 "That persons may reason without language is evident from the circumstance that infants reason, and yet have no language." Put this reasoning in the form of a syllogism in the third figure, and reduce it to the first figure.

*6. Prove that the minor premiss cannot be negative in the first and third figures.

7. Define "Conditional Proposition;" "Hypothetical Proposition;" "Categorical Reasoning;" "Hypothetical Reasoning." What is the Antecedent, and what the Consequent, what the major and minor premiss in the following?—"If Logic is of any value it will procure for us either wealth or honors; it does not procure either; therefore it is of no value." Reduce it to Categorica Form, and examine the validity of the reasoning in both forms.

8. Define "Fallacy." Examine the following:—

> What is no uncommon occurrence may reasonably be expected;
> To be successful in play is no uncommon occurrence;
> To be successful in play may be reasonably expected.

To what head of Fallacies is it to be referred? Define that Fallacy.

*9. What is meant by Evidence? What by Experimental Evidence? What by Circumstantial Evidence? Show that this kind of Evidence admits of degrees, and may involve responsibility.

10. What is the purpose served by the Prerogative Instances of Bacon, and

the Canons of Induction? How may we ascertain that a Class is a Natural one?

11. A ship started three times on a Friday and was stranded on each occasion. It started a hundred times on other days, and was not stranded. The sailors conclude that the starting on the Fridays was the cause of the misfortune. What fallacy have they committed? Show that the Methods of Agreement and Difference do not entitle them to draw the inference?

12. What is the argument from analogy? Why are we entitled to argue from analogy, when we discover an arm of a human being in the earth, that the other arm must have been like it, and not entitled to argue that because the earth is inhabited, therefore the moon must be inhabited?

13. Explain briefly, but precisely, the nature of the three Methods available in the construction of science. Specify the sciences to which each is applicable.

N.B.—Those seeking Honors should omit the questions marked (*), and answer the following instead :—

HONOR QUESTIONS.

(α) Prove (1) that O cannot be a premiss in the First Figure; (2) that it cannot be the major premiss in the Second Figure; (3) that it cannot be the minor in the Third Figure; (4) and that it cannot be a premiss in the Fourth Figure.

(β) What is meant by reasoning in Comprehension? Put the example of reasoning in Query 5 in the form both of Extension and Comprehension; point out the difference between them, and say whether we spontaneously reason in Extension or Comprehension.

(γ) If you make the Abstract Notion different from the General Notion, what effect has this upon the logical analytic of Judgment and Reasoning?

(δ) What is the difference between the maxims or laws reached by the generalization of intuitions, and those reached by a gathered experience? Give examples.

(ε) Take the discovery of the law of gravitation (or any other law of nature) and show that it was reached by the joint Inductive and Deductive Method.

METAPHYSICS.—*Examiner, Dr. M'Cosh.*

1. How would you show, as against the materialist, that the Soul is different from the Body.

*2. What is the Inferential Theory of Sense Perception? Examine the validity of the inference. From what is it an inference?

3. State briefly but precisely what seem to be our original and what our acquired perceptions by the Sense of Sight.

4. Specify the most effective means of improving both the Retentiveness and the Readiness of Memory.

5. Give an analysis of Imagination. What makes it a distinct faculty?

6. What place has the "Idea" in Emotion? What sort of ideas call forth emotions? What ideas call forth feelings of the Ludicrous and Sublime?

7. Love may be considered as an Emotion, and an act of the Will. Bring out clearly the difference between the two. In which of the aspects is Love a virtue?

8. What is Attention? What influence has it on the train of ideas? How may it make actions virtuous or vicious?

9. Can the metaphysician prove first or fundamental truths? What then can he do in regard to them? In the answer mention the persons who used the epithets "first" and "fundamental," and say what qualities they designate.

*10. What precisely is the Intuitive Knowledge obtained by Self-Consciousness?

*11. What precisely is Hume's doctrine of Causation? What defects are there in it?

12. Discuss, with historical notices, the question, whether our perception of moral good be a Cognitive Act of Reason or a Feeling.

13. If our Intuitions as Native Laws are not before Consciousness, how can we discover them? If they look only to singulars how can we reach such necessary general truths as mathematical axioms?

Appendix, No. 8.

General Class Examination.

N.B.—Those seeking Honors should omit the questions marked (*), and answer the following instead:—

(α) "Matter may be defined a permanent possibility of sensation." Examine this definition, taking self-consciousness as witness of what passes in the mind.

(β) What is the Berkeleian theory of Vision? What truth and what error is in it?

(γ) What attempts have been made to reduce the Laws of Association to one law? What do those who attempt this make of the Law of Resemblance—as when a portrait suggests the original?

*1. According to what principle does Bacon classify the sciences? What place does he allot to Metaphysics and Logic? You may offer comments on his views in regard to any of these topics.

2. What, according to Hobbes, is the sole motive by which the will can be swayed ("motive force of the will")? What objections may be taken to his views on this subject? Name philosophers who opposed Hobbes on this and other points.

3. State and examine the doctrine of Descartes as to the way of proving the existence of Matter, and as to the nature of Matter.

4. State and examine Descartes' and Clarke's arguments for the Divine existence.

*5. What was the date of Locke's Essay? What the occasion of its being written, and the aim of the work? What subjects are discussed in Book IV? What is his definition of Knowledge? What objection has been taken to it?

6. What is Locke's definition of "Idea"? What is his precise doctrine as to the origin of our ideas? Did he hold that *nihil est in intellectu quod non prius fuerit in sensu?* What defect is there in his theory? What addition requires to be made to it?

7. When did Leibnitz live? State precisely his doctrine of Pre-established Harmony? What truth and what error is there in it?

*8. Name the works of Reid. What function does he allot to Common Sense? Name some of his judgments of common sense relating to Contingent truths. Examine them by the tests of intuition.

*9. What are Kant's Ideas of Pure Reason? How does he derive them? What objective value does he give them? You may offer comments.

10. What does Virtue consist in, according to Clarke, Hutcheson, Price, and Bentham? You may offer comments.

11. Trace briefly the rise and progress of Utilitarianism in Britain. What fundamental objections may be taken to it?

12. State Alison and Brown's theory of Beauty, and show wherein they agreed and wherein they differed. You may offer comments.

13. State and examine the distinction between the Understanding and the Reason as drawn by Coleridge.

N.B.—Those seeking Honors should omit the questions marked (*), and answer the following instead:—

HONOR QUESTIONS.

(α) State precisely Berkeley's doctrine as to Body, and examine it. In doing so, mention its relation to the philosophy of Locke, and show how Reid met it.

(β) Show what doctrines of Hume are sceptical, and how he may be met on these points.

(γ) Bring out the points of difference, and contrast between Locke and Kant.

(δ) Mention the British philosophers who have treated of the Association of Ideas. Some have said that Association can generate new ideas. Discuss this question.

ENGLISH LITERATURE.—*Examiner, Professor Yonge.*

SUBJECT FOR ESSAY.

On the English Drama, as exhibited in the works of Shakespeare, and compared with the Greek and French theatres.

QUESTIONS.

Appendix, No. 8.
General Class Examination.

1. What are the chief divisions or classes of literature? Mention a few (one or two will be sufficient) of the most eminent writers in the different departments in our own language, with the reigns in which they flourished, giving also the names of their chief political contemporaries.

2. On what period may we with the greatest reason fix as that of the commencement of modern English literature? Explain why you select the period you mention, and what you know of the personal history of him whom you thus indicate as the real founder and parent of modern English literature.

3. What are the chief sources from which Shakespeare has derived the plots of his plays? Give an analysis of the plot, and the two leading characters of any one play.

4. What class of writers is Milton considered chiefly to have imitated in his "Paradise Lost"? Give a sketch of his plot, and compare it with the plot of any other epic poem, pointing out its advantages and disadvantages.

5. Dryden, whose example Pope followed, reproduced some of Chaucer's tales. What may we infer from that as to their opinion of Chaucer, and in what respect did either of them resemble him?

6. Point out some of the chief characteristics of Dryden's translation of Virgil, *or* of Pope's translation of Homer, adding some observations on the success to be attained by any poetical translation of a poem from one language into another.

7. Give a short sketch of Dr. Johnson's life. Compare his principal works with others of a similar character undertaken in England or in other countries.

8. What, up to the end of the last century, were the principal critical works in our language? Under what circumstances were they written, and what was the general purport of some one of them?

Logic.—*Examiner, Dr. M'Cosh.*

HONOR LOGIC.

1. What is Kant's definition of Logic? What his Division? Explain them, and examine in a general way the Kantian view of Logic.

2. Show how Language limits Thought and makes it take a certain form or mould, and point out the advantages and disadvantages of Language considered in this light.

3. Name distinguished Realists, and mention the age in which they lived. What truths and what excesses are in their doctrine?

4. What forms has the supreme Regulating Principle of Reasoning assumed? Discuss the question whether the Dictum of Aristotle is the regulating principle of all reasoning.

5. What is Mr. Mill's regulating principle, and what his formula? Examine them.

6. Give an example of a syllogism in the Fourth Figure. Discuss the question whether the Fourth Figure is legitimate.

7. What reasoning falls naturally into the form of A U A? Give an example. Show wherein A U A of the New Analytic differs from A A A of the Common Logic. In what Figures is it allowable? Is Y U A allowable? Is Y η ω?

8. Explain what is meant by C, ——: M: ——, Γ and give an example, designating the figure.

9. What is meant by "Tendencies"? What by "Causes"? What by "Conditions" or "Occasions"? What by "Effects"? What by "Incidental Consequences"?

10. Can there be a distinction drawn between Agent and Patient? But is the Cause the Agent and the Effect the Patient? Is the Effect ever contemporaneous with the Cause?

11. Explain the precise nature, and the difference, of the two Methods—the Method of Agreement and the Method of Difference. What is the imperfection of the Method of Agreement? How may the Method of Difference obviate this?

12. In what three ways may a law of causation admit of an explanation?

13. Distinguish between the Uniformity of Nature and the law of Cause and

Appendix, No. 8.

General Class Examination.

Effect. To which of these is a Miracle opposed? Is a Miracle opposed to any intuitive principle?

14. Is a Philosophic Criterion of all truth possible? But may there be Criteria of certain classes of truth?

N.B.—Those aiming at mere PASS may substitute a part or the whole of the following in the room of a corresponding number of the above:—

PASS QUESTIONS.

(α). What are the Predicables of Aristotle? Wherein did those of Porphyry differ from them? Can the distinctions involved in these Predicables be carried out? Explain and illustrate the distinction adopted by Thomson.

(β). "This man, having consumption, will not live long." Put the reasoning involved in Categorical Form, first in Extension, and secondly in Comprehension. Put it also in Hypothetical Form. In what relation do these forms stand to each other?

(γ). Define "Dilemma." Put the following in correct form, specify the parts, and bring out the nature of the reasoning involved:—"If man is not a brute or a divinity he must be capable of making progress."

(δ). What is involved in the Joint Inductive and Deductive Method (the Deductive of Mill)? Show how certain departments of science do not admit of being brought under the Inductive Method Proper and require the application of the Joint Method.

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*1. What inquiries did Socrates set aside or discourage? What truths did he seek to establish?

2. In what relation did the Philosophy of Plato stand to that of men and schools that preceded him?

3. What is the First Philosophy, according to Aristotle? What does he mean by "Final Cause"? What place does Bacon give to Final Cause?

4. Show that Locke had a Rational as well as a Sensational and Experiential element in his philosophy.

5. What are Berkeley's and Brown's doctrines as to the eye being percipient of Colour and Extension? What is Hamilton's criticism?

*6. What were the chief points dwelt on by Shaftesbury and Hutcheson? What truths did they establish?

7. What is Hume's doctrine as to mind being a Substance, and as to our Belief in our Personal Identity?

8. What are the Characteristics of the Scottish School? Who best exemplify them? Did Hume possess them? or Brown?

9. What is Cosmothetic Idealism? How does Hamilton examine the hypothesis involved in it?

*10. What is the difference between Presentative and Representative Knowledge?

11. What are the Acts of Comparison, as unfolded by Hamilton? You may compare it with other accounts of the Relations discovered by the mind.

12. What is Hamilton's doctrine of Causation, objective and subjective? Examine it.

*13. What ambiguity is in the word "Conceive," and its derivatives? Some have employed man's power of "Conception," as a test of necessary truth. Examine it, and show what are the proper tests.

N.B.—Those seeking Honors should omit the questions marked (*), and answer the following instead:—

HONOR QUESTIONS.

(α). Show that upon the whole there has been an advance in the account given, and in the arrangement and classification, of the Faculties of the Mind, from the days of the Pre-Socratic Schools of Greece, of Plato and Aristotle, down to the present time.

(β). Name the principal English Philosophers of the 17th century. State briefly, but accurately, the questions discussed by them.

(γ). Give historical notices of the phrases "Common Sense" and "Moral Sense," of their introduction, and of the meaning attached to them.

(δ). How much did Kant allow to Hume? how much deny? You may offer comments.

ANATOMY AND PHYSIOLOGY.—*Examiner, Dr. Redfern.*

[NOTE.—First Year Students are required to answer questions 1, 2, 3, 4; Second Year 1, 2, 4, 5; and Third and Fourth Year 3, 4, 5, 6, 7.]

1. State the views of Schleiden, Schwann, and Beale on the nature and action of organic cells.
2. Describe the characters of the bone corpuscles of human adult bone, and contrast them with those of primary bone and of the bones of aged persons.
3. Describe the characters and uses of saliva and pancreatic juice.
4. Describe the ultimate distribution of the hepatic artery in the liver.
5. State what varieties in the structure of the coats of veins occur in the human body.
6. State briefly the structure and action of the following parts:—Graafian vesicle,—Lieberkühnian follicle of small intestine,—a peptic gastric gland,—Meibomian gland,—sebaceous and sudoriferous gland,—duodenal gland.
7. What changes occur in the human eye during accommodation for the vision of near objects? How may these changes be produced? What structures of the eye have been proved to take no part in the accommodation, and give the proofs?

PRACTICAL ANATOMY.—*Examiner, Dr. Redfern.*

[NOTE.—In addition to making a dissection during a separate period of three hours, First Year Students are required to answer questions 1, 2, 3, 4; Second Year, 2, 3, 4, 5; and Third and Fourth Year, 4, 5, 6, 7.]

1. Describe the tibialis posticus muscle, its attachments, course, action, and relations.
2. State what ligaments and muscles are attached to the radius, and at what parts they are connected with it.
3. Describe the pterygo-maxillary ligament, and the muscles which are connected with it.
4. Describe the peroneal arteries, their course, anastomoses, and relations.
5. Describe the steps of a dissection which will expose the third stage of the subclavian artery,—mention the parts met with in their proper order, and give such details of their position and characters as will lead to their recognition.
6. Trace the course, and state the origin and mode of distribution of the arteries and nerves of the soft and hard pelate.
7. Describe the course, distribution, and relations of the branches of the posterior divisions of the first and second cervical nerves.

THEORY AND PRACTICE OF MEDICINE.—*Examiner, Dr. Cuming.*

FIRST YEAR STUDENTS.

1. Give an account of the mode in which the softening of Pulmonary Tubercle takes place.
2. Describe the anatomical lesions of the intestine which are found in Typhoid Fever.
3. How would you treat a case of Croup?
4. How is Hypertrophy of the Heart to be distinguished from Dilatation?
5. Enumerate the principal forms of Dyspepsia, and give an outline of the indications of treatment in each.

SECOND YEAR STUDENTS.

1. Give an account of the formation of Pus, as it occurs in mucous membranes.
2. What are the conditions on which the amount of albumen in transudations depends?
3. What are the microscopical characters of Tubercle?
4. Give an outline of the progress and treatment of an ordinary case of Measles.

Appendix, No. 8.

General Class Examination.

5. What are the physical signs of the first stages of Phthisis? Give their comparative value.

6. What circumstances influence the direction in which Emboli are carried from the left side of the heart?

MEDICAL JURISPRUDENCE.—*Examiner, Dr. Hodges.*

1. Give a short statement of the results of M. Claude Bernard's Experiments with the Curara Poison.
2. How is Antimony to be detected in the substance of the tissues?
3. What are the symptoms of the Chronic form of poisoning by Antimony?
4. What are the symptoms of poisoning by Benzole?
5. Mention a general test for the Alkaloids, and state the precautions required in its application.
6. What is the treatment to be adopted in poisoning by Prussic Acid?
7. What is known respecting the period required for the elimination from the body of the following poisons--Arsenic, Antimony, Lead, Mercury?

THE FRENCH LANGUAGE.—*Examiner, Professor Meissner.*

I.—Translate into English:

Dans les temps homériques, quand les étrangers étaient jetés sur la plage, par la tempête, on les regardait comme des victimes punies justement par le courroux des dieux, et on les immolait à Diane. C'était de la superstition et de la barbarie. Maintenant il y a une autre superstition et une autre barbarie: c'est la quarantaine. . . . . Il y a quatre ans, le choléra était à Berlin, et à Naples l'on mourait de peur. Je me rappelle que, arrivant sur ce même *Henri IV.*, qui n'y retournera plus, nous attendimes depuis huit heures du matin jusqu'à quatre heures de l'après-midi qu'on eût décidé si l'on nous recevrait ou non; notre crime était d'avoir à bord un Suisse de Neufchâtel. Comme sujet du roi de Prusse, il avait un passe-port prussien. Il fallut beaucoup d'efforts et une demi-journée pour persuader au conseil de santé que Neufchâtel n'était pas à la porte de Berlin. Rien de plus burlesque que les précautions dont on s'avisait alors pour se garantir de la contagion des lettres: car chacune d'elles pouvait apporter le choléra sous enveloppe. Il n'est aspersion ou fumigation qu'on n'essayât, bien qu'il n'y ait aucune raison de croire que la terrible maladie ait la moindre peur du vinaigre ou de la fumée.—J. J. AMPÈRE.

II.—Translate into French:

Who answers in Spanish? I do. How have you finished your letter? I have the honour to be, sir, your very obedient servant. Will you write to the Englishman? No, I am going to write to the Englishwoman. In what season do the birds sing? In spring and summer. Have you paid your workmen and his? I have paid mine in the morning and he will pay his in the evening. When shall I receive these parcels? I will send them to you to-morrow. Have you spoken of the duke? No, we have spoken of the duchess.

III.—My sojourn in New England enabled me to appreciate the truth of an observation I have heard made by many intelligent Americans, that the effect of this civil war will be to consolidate the country. If it were not for the common interest in the war, it would have been hard to realize that Boston formed part of the same country as Chicago, and St. Louis, and Nashville. There, as elsewhere, the war seemed to me the chief bond of union between the different states of the North. Nowhere, indeed, in my own observation, was the ardour for the war greater than in Massachusetts.—EDWARD DICEY.

IV. (*a*) Give the 3rd pers. sing. pres. of *mouvoir*, *tenir*, *battre*, *aller payer*, *prendre*.

(*b*) The 3rd pers. plur. preterite, } of the same verbs.
(*c*) The past participle, }

(*d*) Give the plurals of *mon*, *château*, *canal*, *arc-en-ciel*.

(*e*) The feminine of *doux*, *net*, *brave*, *chanteur*.

(*f*) Form adverbs from *constant*, *poli*, *heureux*.

GREEK.—*Examiner, Professor MacDouall.*

FIRST YEAR STUDENTS.

I.—Translate accurately and perspicuously these lines from the XVIIIth Book of the *Ilias*:—

τὴν δ' ἑτέρην πόλιν ἀμφὶ δύω[1] στρατοὶ εἵατο[2] λαῶν
τεύχεσι λαμπόμενοι. δίχα δὲ σφισι[3] ἄνδανε βουλή,
ἠὲ διαπραθέειν[4] ἢ' ἄνδιχα[21] πάντα δάσασθαι,[5]
κτῆσιν ὅσην πτολίεθρον ἐπήρατον[22] ἐντὸς ἐέργοι.
οἳ δ' οὔ πω πείθοντο, λόχῳ δ' ὑπεθωρήσσοντο.
τεῖχος μέν ῥ' ἄλοχοί τε φίλαι καὶ νήπια[23] τέκνα
ῥύατ'[5] ἐφεσταότες,[7] μετὰ δ' ἀνέρες οὓς ἔχε γῆρας·
οἳ δ' ἴσαν.[8] ἦρχε δ' ἄρα σφιν[3] Ἄρης καὶ Παλλὰς Ἀθήνη.
ἄμφω χρυσείω, χρύσεια δὲ εἵματα ἕσθην,[9]
ἀμφὶς ἀριζήλω[24]· λαοὶ δ' ὑπ' ὀλίζονες[10] ἦσαν.
οἳ δ' ὅτε δὴ ῥ' ἵκανον ὅθι σφίσι εἶκε λοχῆσαι,
ἐν ποταμῷ ὅθι τ' ἀρδμὸς[25] ἔην πάντεσσι βοτοῖσιν,[26]
ἔνθ' ἄρα τοί γ' ἷζον εἰλυμένοι[11] αἴθοπι[27] χαλκῷ.
τοῖσι δ' ἔπειτ' ἀπάνευθε δύω σκοποὶ εἵατο λαῶν,
δέγμενοι[12] ὁππότε μῆλα ἰδοίατο[13] καὶ ἕλικας βοῦς.
οἳ δὲ τάχα προγένοντο, δύω δ' ἅμ' ἕποντο νομῆες
τερπόμενοι σύριγξι· δόλον δ' οὔ τι προνόησαν.
οἳ μὲν τὰ προιδόντες ἐπέδραμον,[14] ὦκα δ' ἔπειτα
τἀμνονθ' ἀμφὶ βοῶν ἀγέλας καὶ πώεα καλὰ
ἀργεννέων[27] οἰῶν, κτεῖνον δ' ἐπὶ μηλοβοτῆρας·
οἳ δ', ὡς οὖν ἐπύθοντο[15] πολὺν κέλαδον παρὰ βουσὶν
εἰράων[28] προπάροιθε καθήμενοι, αὐτίκ' ἐφ' ἵππων
βάντες ἀερσιπόδων[29] μετεκίαθον,[30] αἶψα δ' ἵκοντο.
στησάμενοι δ' ἐμάχοντο μάχην ποταμοῖο παρ' ὄχθας,
βάλλον δ' ἀλλήλους χλακὴρεσιν[31] ἐγχείῃσιν.
ἐν δ' Ἔρις, ἐν δὲ Κυδοιμὸς ὁμίλεεν· ἐν δ' ὁλοὴ Κήρ,[32]
ἄλλον ζωὸν ἔχουσα νεούτατον ἄλλον ἄουτον[33]
ἄλλον τεθνηῶτα,[16] κατὰ μόθον ἕλκε ποδοῖιν·
εἶμα δ' ἔχ' ἀμφ' ὤμοισι δαφοινεὸν[34] αἵματι φωτῶν.[35]
ὡμίλευν δ' ὥς τε ζωοὶ βροτοὶ ἠδὲ μάχοντο,
νεκρούς τ' ἀλλήλων ἕρυον κατατεθνηῶτας.
ἐν δ' ἐτίθη νειὸν μαλακήν, πίειραν[36] ἄρουραν,
εὐρεῖαν τρίπολον[37] πολλοὶ δ' ἀροτῆρες ἐν αὐτῇ
ζεύγεα δινεύοντες ἐλάστρεον[17] ἔνθα καὶ ἔνθα.
οἳ δ' ὁπότε στρέψαντες ἵκοιατο τέλσον[38] ἀρούρης,
τοῖσι δ' ἔπειτ' ἐν χερσὶ δέπας μέλανος οἴνοιο
δόσκεν[18] ἀνὴρ ἐπιών· τοὶ δὲ στρέψασκον ἀν' ὄγμους,[39]
ἱέμενοι νειοῖο βαθείης τέλσον ἱκέσθαι.
ἡ δὲ μελαίνετ' ὄπισθεν, ἀρηρομένῃ[40] δὲ ἐοίκειν[19]
χρυσείη περ ἐοῦσα· τὸ δὴ περὶ θαῦμα τέτυκτο.[20]

II.—1. Those students who seek a mere Pass will parse accurately all the words above numbered from 1 to 20, giving the Attic form of each in every case where it differs.

2. Candidates for Honors will derive or decompound all the words numbered from 21 to 40.

3. All will indicate the words in which lost letters (such as F, σ, κ, λ) are to be restored in accordance with metre, analogy, and tradition.

4. To the translation should be annexed either a condensed paraphrase or a discussion, with a view to discriminate clearly between the several figures, groups, scenes, and employments depicted—especially in connexion with the besieged city, but also in reference to the ploughed field.

5. Remarks may be added upon other devices on the Shield, taking up either the whole or special departments.

Appendix, No. 8.

General Class Examination.

I.—1. The following lines from the *Troades* of EURIPIDES will be translated by all who do not compete for Honors:—

ὅσαι δ' ἀκληροι[9] Τρῳάδων, ὑπὸ στέγαις
ταῖσδ' εἰσί, τοῖς πρώτοισιν ἐξῃρημέναι[1]
στρατοῦ· σὺν αὐταῖς δ' ἡ Λάκαινα[10] Τυνδαρὶς[11]
Ἑλένη, νομισθεῖσ'[2] αἰχμάλωτος[12] ἐνδίκως
τὴν δ' ἀθλίαν τήνδ' εἴ τις εἰσορᾷν θέλει,
πάρεστιν, Ἑκάβην, κειμένην πυλῶν πάρος,
δάκρυα χέουσαν[3] πολλὰ καὶ πολλῶν ὕπερ·
ᾗ παῖς μὲν ἀμφὶ μνῆμ' Ἀχιλλείου τάφου
λάθρα[13] τέθνηκε[4] τλημόνως[14] Πολυξένη,
φροῦδος[15] δὲ Πρίαμος καὶ τέκν' ἦν δὲ παρθένον
μεθῆκ'[5] Ἀπόλλων δρομάδα[16] Κασάνδραν ἄναξ,
τὸ τοῦ θεοῦ τε παραλιπὼν[6] τό τ' εὐσεβὲς
ναμεῖ βιαίως σκότιον Ἀγαμέμνων λέχος,
ἃ λ', ὦ ποτ' εὐτυχοῦσα, χαῖρέ μοι, πόλις,
ξεστόν[17] τε πύργωμ'! εἴ σε μὴ διώλεσεν[7]
Παλλὰς Διὸς παῖς, ἦσθ' ἂν ἐν βάθροις[18] ἔτι.

1. The words numbered from 1 to 8 are to be accurately parsed.
2. The words numbered from 9 to 18 are to be derived or decompounded.
3. The 10th, 11th, 12th, and 13th lines are to be written out and scanned, the feet being discriminated and the quantity marked over every syllable.

II.—Candidates for Honors will translate perspicuously the following Ode, and subjoin brief annotations:—

ἀμφί μοι Ἴλιον, ὦ Μοῦσα! καινῶν ὕμνων [στρ.
ἄσον ἐν δακρύοις ᾠδὰν ἐπικήδειον.
νῦν γὰρ μέλος εἰς Τροίαν ἰακχήσω,
τετραβάμονος ὥς ὑπ' ἀπήνας
Ἀργείων ὁλόμαν τάλαινα δοριάλωτος, εὖτ'
ἔλειπον οὐράνια βρέμοντες ἵππον
χρυσεοφάλαρον ἔνοπλον ἐν πύλαις Ἀχαϊοί
ἀνὰ δ' ἐβόασεν λεὼς
Τρῳάδος ἀπὸ πέτρας σταθείς·
"ἴτ', ὦ πεπαυμένοι πόνων,
τόδ' ἱερὸν ἀνάγετε ξυλον
Ἰλιάδι διογενεῖ κόρᾳ!"
τίς οὐκ ἔβα νεανιῶν, τίς οὐ γεραιὸς ἐκ δόμων;
κεχαρμένοι δ' ἀοιδαῖς δόλιον ἔσχον ἄταν.
πᾶσα δὲ γέννα Φρυγῶν πρὸς πύλας ὡρμάθη, [ἀντιστρ.
πεύκᾳ ἐν οὐρείᾳ ξεστὸν δόλον Ἀργείων
καὶ Δαρδανίας ἄταν θεᾷ δώσων
χάριν ἀζυγεῖ ἀμβροτοπώλῳ,
κλωστοῖς δ' ἀμφιβόλοις λίνοισιν, ἅτε νεὼς σκάφος
κελαινόν, ἕδρανά τε λάϊν' ἔς τε
δάπεδα φόνια πατρίδι Παλλάδος θέσαν θεᾶς.
ἐπὶ δὲ πόνῳ καὶ χαρᾷ
νύκτερον ἐπὶ κνέφας παρῆν,
Λίβυς δὲ λωτὸς ἐκτύπει
Φρυγιά τε μέλεα, παρθένοι δ'
ἀέριον ἀνὰ κρότον ποδῶν
βοὰν ἔμελπον εὔφρον', ἐν δόμοις δὲ παμφαὲς σέλας
πυρὸς μέλαιναν αἴγλαν ἀπεδίωκε καπνῷ.
ἐγὼ δὲ τὰν ὀρεστέραν τότ' ἀμφὶ μέλαθρα παρθένον [ἐπῳδός.
Διὸς κόραν ἐμελπόμαν χοροῖσι, φοινία δ' ἀνὰ
πτόλιν βοὰ κατεῖχε Περγάμων ἕδρας· φίλα δὲ βρέφη
πέπλοισι περιέβαλλε ματρὶ χεῖρας ἐπτοημένας.
λόχος δ' ἐξέβαλλ' Ἄρη κόρας ἔργα Παλλάδος,
σφαγαὶ δ' ἀμφιβώμιοι Φρυγῶν ἦν τε δεμνίοις
καράτομος ἐρημία νεανιῶν στέφανον ἕφερον
Ἑλλάδι κουροτρόφῳ Φρυγῶν δὲ πατρίδι πένθη.

SECOND YEAR STUDENTS.

Appendix. No. 8.

General Class Examination

I.—All will translate perspicuously these lines from the VIIth Book of the *Odysseia* :—

χρύσειοι δ' ἄρα κοῦροι ἐυδμήτων[21] ἐπὶ βωμῶν
ἕστασαν αἰθομένας[2] δαῖδας μετὰ χερσὶν ἔχοντες,
φαίνοντες νύκτας κατὰ δώματα δαιτυμόνεσσιν.[3]
πεντήκοντα δέ οἱ δμωαὶ κατὰ δῶμα γυναῖκες—
αἳ μὲν ἀλετρεύουσι[22] μύλῃς[4] ἔπι μήλοπα[23] καρπόν,
αἳ δ' ἱστοὺς ὑφάουσι καὶ ἠλάκατα[24] στρωφῶσιν[5]
ἡμεναι, οἷά τε[5] φύλλα μακεδνῆς[25] αἰγείροιο·
καιρωσέων[26] δ' ὀθονέων[7] ἀπολείβεται ὑγρὸν ἔλαιον.
ὅσσον Φαίηκες περὶ πάντων ἴδριες ἀνδρῶν
νῆα θοὴν ἐνὶ πόντῳ ἐλαυνέμεν,[8] ὣς δὲ[9] γυναῖκες
ἱστὸν τεχνῆσσαι·[10] περὶ γάρ σφισι[11] δῶκεν Ἀθήνη
ἔργα τ' ἐπίστασθαι περικαλλέα καὶ χρένας ἐσθλάς.
ἔκτοσθεν δ' αὐλῆς μέγας ὄρχατος[27] ἄγχι θυράων
τετράγυος·[28] περὶ δ' ἕρκος ἐλήλαται[12] ἀμφοτέρωθεν.
ἔνθα δὲ δένδρεα μακρὰ πεφύκασιν[13] θαλέοντα,
ὄγχναι καὶ ῥοιαὶ καὶ μηλέαι ἀγλαόκαρποι
συκέαι τε γλυκεραὶ καὶ ἐλαῖαι τηλεθάουσαι.
τάων[14] οὔ ποτε καρπὸς ἀπόλλυται οὐδ' ἀπολείπει
χείματος οὐδὲ θέρευς,[15] ἐπετήσιος·[29] ἀλλὰ μάλ' αἰεὶ
ζεφυρίη πνείουσα τὰ μὲν φύει ἄλλα δὲ πέσσει.
ἔνθα δέ οἱ πολύβοτρυς ἀλωὴ ἐρρίζωται,[16]
τῆς ἕτερῃ μέν θ' εἰλόπεδον[30] λευρῷ ἐνὶ χώρῳ
τέρσεται[17] ἠελίῳ, ἑτέρῃ δ' ἄρα τε τρυγάουσιν,[31]
ἄλλῃ δὲ τραπέουσι·[18] πάροιθε δέ τ' ὄμφακες εἰσὶν
ἄνθος ἀφιεῖσαι, ἕτεραι δ' ὑποπερκάζουσιν.[31]
ἔνθα δὲ κοσμηταὶ πρασιαὶ παρὰ νείατον[19] ὄρχον
παντοῖαι πεφύασιν[20] ἐπηετανὸν[32] γανάουσαι.
ἐν δὲ δύω κρῆναι—ἣ μέν τ' ἀνὰ κῆπον ἅπαντα
σκίδναται, ἣ δ' ἑτέρωθεν ὑπ' αὐλῆς οὐδὸν ἵησιν
πρὸς δόμον ὑψηλόν, ὅθεν ὑδρεύοντο πολῖται

And Candidates for Honors will translate likewise these lines from Book VIII. :—

οὐδὲ Ποσειδάωνα γέλως ἔχε, λίσσετο δ' αἰεί
Ἥφαιστον κλυτοεργὸν ὅπως λύσειεν Ἄρηα.
καὶ μιν φωνήσας ἔπεα πτερόεντα προσηύδα.
"λῦσον· ἐγὼ δέ τοι αὐτὸν ὑπίσχομαι, ὡς σὺ κελεύεις,
τίσειν αἴσιμα πάντα μετ' ἀθανάτοισι θεοῖσιν."
τὸν δ' αὖτε προσέειπε περικλυτὸς Ἀμφιγυήεις·
"μή με, Ποσείδαον γαιήοχε! ταῦτα κέλευε·
δειλαί τοι δειλῶν γε καὶ ἐγγύαι ἐγγυάεσθαι.
πῶς ἂν ἐγώ σε δέοιμι μετ' ἀθανάτοισι θεοῖσιν,
εἴ κεν Ἄρης οἴχοιτο χρέος καὶ δεσμὸν ἀλύξας;"
τὸν δ' αὖτε προσέειπε Ποσειδάων ἐνοσίχθων·
"Ἥφαιστ'! εἴ περ γάρ κεν Ἄρης χρεῖος ὑπαλύξας
οἴχηται φεύγων, αὐτός τοι ἐγὼ τάδε τίσω."
τὸν δ' ἠμείβετ' ἔπειτα περικλυτὸς Ἀμφιγυήεις·
"οὐκ ἔστ' οὐδὲ ἔοικε τεὸν ἔπος ἀρνήσασθαι."
ὣς εἰπὼν δεσμὸν ἀνίη μένος Ἡφαίστοιο.

II.—1. Those who seek a mere Pass will parse accurately the words above numbered from 1 to 20, giving the Attic form of each whenever it differs.

2. Competitors for Honors will derive or decompound the words above numbered from 21 to 32.

3. All will indicate the words in which lost letters (such as *F*, σ, κ, λ) are to be restored in accordance with metre, analogy, and tradition.

4. All will try to elucidate (*a*) the position of the gardens, and (*b*) the uses made of the two water springs.

5. Competitors for Honors will criticise as well as interpret the second extract—if not also the first—and suggest any corrections of the text which may seem necessary or desirable.

No. 8.

General Class Examination.

I.—Translate perspicuously these lines from the *Prometheus Vinctus* of Aeschylus:—

λέγων ἔοικα πολλὰ καὶ μάτην[1] ἐρεῖν·
τέγγει γὰρ οὐδὲν οὐδὲ μαλθάσσει[2] κέαρ
λιταῖς· δάκνων δὲ στόμιον[3] ὡς νεοζυγὴς
πῶλος βιάζει καὶ πρὸς ἡνίας μάχει.
ἀτὰρ σφοδρύνει[4] γ' ἀσθενεῖ σοφίσματι.
αὐθαδία[5] γὰρ τῷ φρονοῦντι μὴ καλῶς
αὐτὴ καθ' αὑτὴν οὐδενὸς μεῖον σθένει.
σκέψαι δ', ἐὰν μὴ τοῖς ἐμοῖς πεισθῇς λόγοις,
οἷός σε χειμὼν καὶ κακῶν τρικυμία[6]
ἕπεισ' ἄφυκτος. πρῶτα μὲν γὰρ ὀκρίδα[7]
φάραγγα βροντῇ καὶ κεραυνίᾳ φλογὶ
Πατὴρ σπαράξει τήνδε καὶ κρύψει δέμας
τὸ σὸν, πετραία δ' ἀγκάλη[8] σε βαστάσει.
μακρὸν δὲ μῆκος ἐκτελευτήσας χρόνου
ἄψορρον[9] ἥξεις ἐς φάος· Διὸς δὲ σοι
πτηνὸς κύων, δαφοινὸς[10] αἰετὸς, λάβρως
διαρταμήσει[12] σώματος μέγα ῥάκος,
ἄκλητος ἕρπων δαιταλεὺς·[13] πανήμερος,
κελαινόβρωτον[14] δ' ἦπαρ ἐκθοινήσεται,
τοιοῦδε μόχθου τέρμα μή τι προσδόκα,[15]
πρὶν ἂν θεῶν τις διάδοχος τῶν σῶν πόνων
φανῇ θελήσῃ τ' εἰς ἀναὐγητον μολεῖν
Ἅιδην κνεφαίᾳ[16] τ' ἀμφὶ Ταρτάρου βάθη.

II.—1. Give the laws of the metre here exemplified.

2. Scan the 3rd, 21st, and 17th lines, discriminating the feet, and marking the quantity over every syllable. In connexion with the 17th line state how a short vowel before initial ρ is treated in iambic and also in epic verses.

3. Derive or decompound every word to which a number is affixed in the extract.

4. Comment critically on some clauses, the reading or the interpretation of which may be doubtful.

III.—Translate the following sentences (from Goldsmith) in Attic prose, and accentuate your version throughout:—

The right of capital punishment is obvious in cases of murder; as it is the duty of all, from the law of self-defence, to cut off that man who has shown a disregard for the life of another. Against such, all nature rises in arms. But it is not so against him who steals my property. Natural law gives me no right to take away his life, as by that the horse he steals is as much his property as mine. If then I have any right, it must be from a compact made between us, that he who deprives the other of his horse shall die. But this is a false compact; because no man has a right to barter his life, any more than to take it away, as it is not his own. And besides, the compact is inadequate, and would be set aside even in a court of modern equity, as imposing a great penalty for a trifling inconvenience, since it is far better that two men should live than one man should ride.

THIRD YEAR STUDEMTS.

I.—Translate perspicuously, and in a good English style, the following excerpts from the Xth Book of the *Politeia* of Platon:—

"Τὸ μὲν βίᾳ κατεχόμενον ἐν ταῖς οἰκείαις ξυμφοραῖς καὶ πεπεινηκὸς τοῦ δακρῦσαι καὶ ἀποδύρασθαι ἱκανῶς καὶ ἀποπλησθῆναι, φύσει ὂν τοιοῦτον οἷον τούτων ἐπιθυμεῖν, τοῦτ' ἐστὶ τὸ ὑπὸ τῶν ποιητῶν πιμπλάμενον καὶ χαῖρον. τὸ δὲ φύσει βέλτιστον ἡμῶν, ἅτε οὐχ ἱκανῶς πεπαιδευμένον λόγῳ οὐδὲ ἔθει, ἀνίησι τὴν φυλακὴν τοῦ θρηνώδους τούτου, ἅτε ἀλλότρια πάθη θεωροῦν καὶ ἑαυτῷ οὐδὲν αἰσχρὸν ὄν, εἰ ἄλλος ἀνὴρ ἀγαθὸς φάσκων εἶναι ἀκαίρως πενθεῖ, τοῦτον ἐπαινεῖν καὶ ἐλεεῖν· ἀλλ' ἐκεῖνο κερδαίνειν ἡγεῖται, τὴν

ἡδονήν, καὶ οὐκ ἂν δέξαιτο αὐτῆς στερηθῆναι καταφρονήσας ὅλου τοῦ ποιήματος. λογίζεσθαι γάρ, οἶμαι, ὀλίγοις τισὶ μέτεστιν ὅτι ἀπολαβεῖν ἀνάγκη ἀπὸ τῶν ἀλλοτρίων εἰς τὰ οἰκεῖα· θρέψαντα γὰρ ἐν ἐκείνοις ἰσχυρὸν τὸ ἐλεεινὸν οὐ ῥᾴδιον ἐν τοῖς αὐτοῦ πάθεσι κατέχειν." "ἀληθέστατα," ἔφη. "ἆρ' οὖν οὐχ ὁ αὐτὸς λόγος καὶ περὶ τοῦ γελοίου, ὅ τι ἂν αὐτὸς αἰσχύνοιο γελωτοποιῶν, ἢν ἐν μιμήσει κωμῳδικῇ ἢ καὶ ἰδίᾳ ἀκούων σφόδρα χαίρῃς καὶ μὴ μισῇς ταὐτὸν ποιῶν ὅ περ ἐν τοῖς ἐλέοις; ὃ γὰρ τῷ λόγῳ αὖ κατεῖχες ἐν σαυτῷ βουλόμενον γελωτοποιεῖν, φοβούμενος δόξαν βωμολοχίας, τόδ' αὖ ἀνίης, καὶ ἐκεῖ νεανικὸν ποιήσας ἔλαθες πολλάκις ἐν τοῖς οἰκείοις ἐξενεχθείς, ὥστε κωμῳδοποιὸς γενέσθαι." "καὶ μάλα," ἔφη. "καὶ περὶ ἀφροδισίων δὴ καὶ θυμοῦ καὶ περὶ πάντων τῶν ἐπιθυμητικῶν τε καὶ λυπηρῶν καὶ ἡδέων ἐν τῇ ψυχῇ, ἃ δή φαμεν πάσῃ πράξει ἡμῖν ἕπεσθαι, δῆλον ὅτι τοιαῦτα ἡμᾶς ἡ ποιητικὴ μίμησις ἐργάζεται. τρέφει γὰρ ταῦτα ἄρδουσα, δέον αὐχμεῖν, καὶ ἄρχοντα ἡμῖν καθίστησι, δέον ἄρχεσθαι αὐτά, ἵνα βελτίους τε καὶ εὐδαιμονέστεροι ἀντὶ χειρόνων καὶ ἀθλιωτέρων γιγνώμεθα." "οὐκ ἔχω ἄλλως φάναι," ἦ δ' ὅς. . . . . "ἡμεῖς γε, εἴ τινα ἔχοι λόγον εἰπεῖν ἡ πρὸς ἡδονὴν ποιητικὴ καὶ ἡ μίμησις, ὡς χρὴ αὐτὴν εἶναι ἐν πόλει εὐνομουμένῃ, ἄσμενοι ἂν καταδεχοίμεθα, ὡς ξύνισμέν γε ἡμῖν αὐτοῖς κηλουμένοις ὑπ' αὐτῆς. ἀλλὰ γὰρ τὸ δοκοῦν ἀληθὲς οὐχ ὅσιον προδιδόναι. ἦ γάρ, ὦ φίλε! οὐ κηλεῖ ὑπ' αὐτῆς καὶ σύ, καὶ μάλιστα ὅταν δι' Ὁμήρου θεωρῇς αὐτήν;" "πολύ γε." "οὐκοῦν δικαία ἐστὶν οὕτω κατιέναι ἀπολογησαμένη ἢ ἐν μέλει ἤ τινι ἄλλῳ μέτρῳ;" "πάνυ μὲν οὖν." "δοῖμεν δέ γέ που ἂν καὶ τοῖς προστάταις αὐτῆς, ὅσοι μὴ ποιητικοὶ φιλοποιηταὶ δέ, ἄνευ μέτρου λόγον ὑπὲρ αὐτῆς εἰπεῖν, ὡς οὐ μόνον ἡδεῖα ἀλλὰ καὶ ὠφελίμη πρὸς τὰς πολιτείας καὶ τὸν βίον τὸν ἀνθρώπινόν ἐστι. καὶ εὐμενῶς ἀκουσόμεθα· κερδανοῦμεν γάρ που, ἐὰν μὴ μόνον ἡδεῖα φανῇ ἀλλὰ καὶ ὠφελίμη." "πῶς δ' οὐ μέλλομεν," ἔφη, "κερδαίνειν;" "εἰ δέ γε μή, ὦ φίλε ἑταῖρε! ὥς περ οἱ ποτέ του ἐρασθέντες, ἐὰν ἡγήσωνται μὴ ὠφέλιμον εἶναι τὸν ἔρωτα, βίᾳ μὲν ὅμως δὲ ἀπέχονται, καὶ ἡμεῖς οὕτω, διὰ τὸν ἐγγεγονότα μὲν ἔρωτα τῆς τοιαύτης ποιήσεως ὑπὸ τῆς τῶν καλῶν πολιτειῶν τροφῆς, εὖνοι μὲν ἐνδεξόμεθα φανῆναι αὐτὴν ὡς βελτίστην καὶ ἀληθεστάτην, ἕως δ' ἂν μὴ οἷά τ' ᾖ ἀπολογήσασθαι, ἀκροασόμεθ' ἐπᾴδοντες ἡμῖν αὐτοῖς ταύτην τὴν ἐπῳδὴν καὶ τοῦτον τὸν λόγον ὃν ἐλέγομεν, εὐλαβούμενοι πάλιν ἐμπεσεῖν εἰς τὸν παιδικόν τε καὶ τὸν τῶν πολλῶν ἔρωτα. αἰσθανόμεθα δ' οὖν ὡς οὐ σπουδαστέον ἐπὶ τῇ τοιαύτῃ ποιήσει ὡς ἀληθείας τε ἁπτομένῃ καὶ σπουδαίᾳ, ἀλλ' εὐλαβητέον αὐτὴν τῷ ἀκροωμένῳ, περὶ τῆς ἐν αὐτῷ πολιτείας δεδιότι, καὶ νομιστέα ἅ περ εἰρήκαμεν περὶ ποιήσεως."

II.—In very brief notes you may elucidate any elliptical or harsh constructions and such idioms as you consider most remarkable.

III.—Trace succinctly the lines of discussion pursued in this book, noting how one glides into another, and commenting upon the treatment of the Pamphylian myth at the close.

LATIN.—*Examiner, Professor Nesbitt.*

FIRST YEAR STUDENTS.

Translate:

1. Perventum inde ad frequentem cultoribus alium, ut inter montanos, populum. ibi non bello aperto sed suis artibus, fraude et insidiis, est prope circumventus. magno natu principes castellorum oratores ad Poenum veniunt, alienis malis, utili exemplo, doctos memorantes amicitiam malle quam vim experiri Poenorum; itaque obedienter imperata facturos: commeatum itinerisque duces et ad fidem promissorum obsides acciperet. Hannibal nec temere credendum nec aspernandum ratus, ne repudiati aperte hostes fierent benigne cum respondisset, obsidibus quos dabant acceptis et commeatu, quem in viam ipsi detulerant, usus, nequaquam ut inter pacatos, composito agmine duces eorum sequitur. primum agmen elephanti et equites erant, ipse post cum robore peditum circumspectans sollicitusque omnia incedebat. ubi in angustiorem viam et parte altera subiectam iugo insuper imminenti ventum est undique ex insidiis barbari a fronte ab tergo coorti comminus eminus petunt, saxa ingentia in agmen devolvunt. maxima ab tergo vis hominum urgebat. in eos versa peditum acies haud dubium fecit, quin, nisi firmata extrema agminis fuissent, aigens in eo saltu accipienda clades fuerit. tunc quoque ad extremum periculi nc prope perniciem ventum est.—LIVY, xxi. 34.

Appendix, No. 8.

General Class Examination.

2. Quos quide mego, si ullo modo fieri possit, non tam ulcisci studeo quam sanare sibi ipsos, placare rei publicae, neque, id qua re fieri non possit, si me audire volent intelligo. Exponam enim vobis, Quirites, ex quibus generibus hominum istae copiae comparentur: deinde singulis medicinam consilii atque orationis meae, si quam potero, adferam. Unum genus est eorum, qui magno in aere alieno maiores etiam possessiones habent, quarum amore adducti dissolvi nullo modo possunt. Horum hominum species est honestissima: sunt enim locupletes: voluntas vero et causa impudentissima. Tu agris, tu aedificiis, tu argento, tu familia, tu rebus omnibus ornatus et copiosus sis et dubites de possessione detrahere, acquirere ad fidem? Quid enim exspectas? bellum? Quid ergo? in vastatione omnium tuas possessiones sacrosanctas futuras putas? An tabulas novas? Errant qui istas a Catilina exspectant: meo beneficio tabulae novae proferentur, verum auctionariae. Neque enim isti, qui possessiones habent, alia ratione ulla salvi esse possunt. Quod si maturius facere voluissent neque, id quod stultissimum est, certare cum usuris fructibus praediorum, et locupletioribus his et melioribus civibus uteremur.—Cicero, *In Cat.* ii. 8.

(*a*) Give the principal tenses of the following verbs:—*circumventus*, *malle*, *ratus*, *coorti*, *ulcisci*, *dissolvi*.

(*b*) Explain the constructions *circumspectans sollicitusque omnia* in the first, and *sanare sibi ipsos* in the second extract.

(*c*) *Doctos memorantes* . . . . *acciperet* change to the *oratio directa*.

(*d*) Give the phrase opposed to *aes alienum*. What do you understand by *tabulae novae*, and what by *tabulae auctionariae?* To what measure does Cicero refer under the latter designation? Give historical instances of the application of the former.

Translate into Latin:

1. When thanks had been given to us by the senate, and that report had spread through the city, a sudden rush of the population is made to the senate-house.

2. He himself meanwhile determined to wait in Gaul until he had assigned the quarters of the legions, and fortified the winter camp.

3. I will cheerfully undergo the greatest storm of unpopularity, provided that this danger be averted from my country.

Translate into Latin:

Aristides, while in exile, proved that not he, but those who banished him, were the enemies of the state; for when he ascertained that the Persian fleet was so large that the Greeks could not escape, he went over to Salamis, and reported the fact, in order that they might act to more advantage. This, however, he would never have done, had he thought more of the enmity of Themistocles than of the safety of his country. The Athenians would not permit the increase of the Spartan interest, nor the Spartans that of the Athenians; but, probably, had they known that Philip of Macedon was plotting against their liberties, they would not have suffered his power to increase, but would have combined their forces and taken the field against their common enemy.

HONORS.

Translate, adding brief notes when you think it necessary:

1. At, si quos haud ulla viros vigilantia fugit,
Ante locum similem exquirunt, ubi prima paretur
Arboribus seges et quo mox digesta feratur,
Mutatam ignorent subito ne semina matrem.
Quin etiam coeli regionem in cortice signant,
Ut, quo quaeque modo steterit, qua parte calores
Austrinos tulerit, quae terga obverterit axi,
Restituant: adeo in teneris consuescere multum est.

Collibus an plano melius sit ponere vitem,
Quaere prius. Si pinguis agros metabere campi,
Densa sere: in denso non segnior ubere Bacchus;
Sin tumulis acclive solum collesque supinos,
Indulge ordinibus; nec secius omnis, in unguem
Arboribus positis, secto via limite quadret.
Ut saepe ingenti bello quum longa cohortes
Explicuit legio, et campo stetit agmen aperto,
Directaeque acies, ac late fluctuat omnis
Aere renidenti tellus, necdum horrida miscent
Proelia, sed dubius mediis Mars errat in armis:
Omnia sint paribus numeris dimensa viarum,
Non animum modo uti pascat prospectus inanem,
Sed quia non aliter vires dabit omnibus aequas
Terra, neque in vacuum poterunt se extendere rami.

VIRGIL, *Georg.* II. 265–287.

2. AE. Si satis iam debacchatus es, leno audi si uis nunciam.
SA. Egon debacchatus sum autem an tu in me? AE. Mitte ista atque ad rem redi.
SA. Quam rem? quo redeam? AE. Iamne me uis dicere id quod ad te attinet?
SA. Cupio, aequi modo aliquid. AE. Vah, leno iniqua me non uolt loqui.
SA. Leno sum, pernicies communis, fateor, adulescentium.
Periurus, pestis: tamen tibi a me nullast orta iniuria.
AE. Nam hercle etiam hoc restat. SA. Illuc quaeso redi, quo coepisti, Aeschine.
AE. Minis uiginti tu illam emisti? SA. Loqueris. AE. Tibt uortat male.
Argenti tantum dabitur. SA. Quid? si ego tibi illam nolo uendere.
Coges me? AE. Minume. SA. Namque id metui. AE. Neque uendundam censeo.
Quae liberast: nam ego liberali illam adsero causa manu.
Nunc uide utrum uis: argentum accipere an causam meditari tuam.
Delibera hoc, dum ego redeo, leno. SA. Pro supreme Iuppiter,
Minume miror qui insanire occipiunt ex iniuria.
Domo me eripuit, uerberauit: me inuito abduxit meam:
Homini misero plus quingentos colaphos infregit mihi.
Ob malefacta haec tantidem emptam postulat sibi tradier.
Verum enim quando bene promeruit, fiat: suom ius postulat.
Age iam cupio, modo si argentum reddat. sed ego hoc hariolor:
Vbi me dixero dare tanti, testis faciet ilico,
Vendidisse me, de argento somnium: "mox: cras redi."
Id quoque possum ferre, modo si reddat, quamquam iniuriumst.
Verum cogito id quod res est: quando eum quaestum occeperis,
Accipiunda et mussitanda iniuria adulescentiumst.
Sed nemo dabit: frustra egomet mecum has rationes puto.

TERENCE, *Adelphi* II., i. 30–54.

Scan and ictuate the four first lines. Classify the principal metrical licences in the Latin comic poets.

3. Explain the following expressions:—*Alii clanculum patres quæ faciunt; modo quid designavit; feres infortunium; e re natâ melius fieri haud potuit; qui alicui rei est; is quamobrem huc veneram; ut captus servolorum est; me indicente; primus obruntio.*

4. Translate into Latin elegiac verse:

In all my wanderings round this world of care,
In all my griefs—and God has given my share—
I still had hopes my latest hours to crown,
Amidst these humble bow'rs to lay me down;
To husband out life's taper at the close,
And keep the flame from wasting by repose:
I still had hopes, for pride attends us still,
Amidst the swains to show my book-learn'd skill,
Around my fire an evening group to draw,
And tell of all I felt and all I saw;

Appendix, No. 8.

General Class Examination.

And, as a hare whom hounds and horns pursue,
Pants to the place from whence at first she flew,
I still had hopes, my long vexations past,
Here to return—and die at home at last.

SECOND YEAR STUDENTS.

Translate:

Qui, ne tuberibus propriis offendat amicum,
Postulat, ignoscet verrucis illius: aequum est,
Peccatis veniam poscentum reddere rursus.
Denique, quatenus excidi penitus vitium irae,
Cetera item nequeunt stultis haerentia, cur non
Ponderibus modulisque suis ratio utitur, ac res
Ut quaeque est, ita suppliciis delicta coërcet?
Si quis eum servum, patinam qui tollere iussus
Semesos pisces tepidumque ligurrierit ius,
In cruce suffigat: Labeone insanior inter
Sanos dicatur. Quanto hoc furiosius atque
Maius peccatum est: Paulum deliquit amicus;
Quod nisi concedas, habeare insuavis: acerbus
Odisti et fugis ut Rusonem debitor aeris,
Qui nisi, cum tristes misero venere Calendae.
Mercedem aut nummos unde unde extricat, amaras
Porrecto iugulo historias captivus ut audit.

HOR., *Sat.*, i. 3, 73–89.

DROG. "Si pranderet olus patienter, regibus uti
Nollet Aristippus." ARIST. "Si sciret regibus uti,
Fastidiret olus, qui me notat." Utrius horum
Verba probes et facta, doce, vel iunior audi,
Cur sit Aristippi potior sententia. Namque
Mordacem Cynicum sic eludebat, ut aiunt:
"Scurror ego ipse mihi, populo tu: rectius hoc et
Splendidius multo est. Equus ut me portet, alat rex,
Officium facio; tu poscis vilia rerum,
Dante minor, quam vis fers te nullius egentem."
Omnis Aristippum decuit color et status et res,
Tentantem maiora, fere praesentibus aequum.
Contra, quem duplici panno patientia velat,
Mirabor, vitae via si conversa decebit.
Alter purpureum non exspectabit amictum,
Quidlibet indutus celleberrima per loca vadet,
Personamque feret non inconcinnus utramque:
Alter Mileti textam cane peius et angui
Vitabit chlamyden, morietur frigore, si non
Retuleris pannum. Refer et sine vivat ineptus!

HOR., *Epist.*, i. 17, 13–32.

(α) Give the principal tenses of the following verbs:—*ignoscet*, *excidi*, *semesos*, *ligurrierit*, *porrecto*, *pranderet*, *suffigat*, *eludebat*.

(β) Explain the allusions in *Labeone insanior;* in *historias audit;* and in *duplici panno patientia velat.*

(γ) Relate what you know of the lives of the two philosophers mentioned in the second extract.

Translate into Latin the following sentences:

1. By command of Domitius the people of Marseilles dismiss their fleet; they seize upon merchant ships and bring them into the harbour: they devote to public use whatever corn was found: the rest of the merchandise and supplies they reserve for the blockade of the city.

2. At one time I consider what to say, at another time I say it: which two things most men, relying on their ability, do at the same time; but assuredly those very persons would speak considerably better, if they chose for themselves one time for thinking, another for speaking.

Appendix, No. 8.

General Class Examination.

3. The Helvetii set all their towns on fire, about twelve in number, and burnt all their corn, except what they intended to carry with them, in order that, the hope of a return having been taken away, they might be better prepared to encounter all dangers.

Translate into Latin: —

The Senate, however, exulted in the advance it had made, and believed that its path now lay open before it, and that its mortal enemy must soon fall into its hands. Cæsar, on his part, in the midst of the most overwhelming cares and perils of war, kept his eye intently fixed on the progress of affairs in the city and saw that his only hope now lay in the errors of his antagonists. His term of government was approaching its close, whilst his opponents were eager to have it cut short at once. At the moment of its expiration, as soon as he should become once more a private citizen, denuded of office and employment, charges, of malversation would be preferred.

I.—Translate:

1. C. Gracchi frumentaria magna largitio: exhauriebat igitur aerarium: modica M. Octavii et rei publicae tolerabilis et plebi necessaria: ergo et civibus et rei publicae salutaris. In primis autem videndum erit ei, qui rem publicam administrabit, ut suum quisque teneat neque de bonis privatorum publice deminutio fiat. Perniciose enim Philippus in tribunatu, quum legem agrariam ferret, quam tamen antiquari facile passus est et in eo vehementer se moderatum praebuit, sed quum in agendo multa populariter tum illud male, "non esse in civitate duo milia hominum qui rem haberent." Capitalis oratio est, ad aequationem bonorum pertinens, qua peste quae potest esse maior? Hanc enim ob causam maxime, ut sua tenerentur, res publicae civitatesque constitutae sunt. Nam, etsi duce natura congregabantur homines, tamen spe custodiae rerum suarum urbium praesidia quaerebant. Danda etiam opera est ne, quod apud maiores nostros saepe fiebat propter aerarii tenuitatem adsiduitatemque bellorum, tributum sit conferendum, idque ne eveniat multo ante erit providendum. Sin quae necessitas huius muneris alicui rei publicae obvenerit—malo enim alii quam nostrae ominari, neque tamen de nostra, sed de omni re publica disputo,—danda erit opera ut omnes intelligant, si salvi esse velint, necessitati esse parendum.—Cicero, *de Officiis*, ii. 21.

2. Nondum centum et decem anni sunt, quum de pecuniis repetundis a L. Pisone lata lex est, nulla antea quum fuisset. At vero postea tot leges et proximae quaeque duriores, tot rei, tot damnati, tantum Italicum bellum propter iudiciorum metum excitatum, tanta sublatis legibus et iudiciis expilatio direptioque sociorum, ut imbecillitate aliorum, non nostra virtute valeamus.—*Ibid.*

(*a*) Explain the term *antiquo*; give the force of *tamen* in the phrase *neque tamen de nostra*; and point out the peculiarity in the expression, *proximae quaeque duriores*.

(*b*) Mention, with dates, the provisions of the various laws referred to.

(*c*) What event put an end to the *tributa* at Rome? The Mithridatic war was followed by a further remission of taxation?

(*d*) Explain the allusions in *Italicum bellum propter judiciorum metum excitatum*, and in *sublatis legibus et judiciis*.

II.—Translate:

Nihil est profecto stultius neque stolidius
Neque mendacilocum neque adeo argutum magis
Neque confidentiloquius neque periurius
Quam urbani adsidui ciues, quos scurras uocant.
Atque egomet me adeo cum illis una ibidem traho:
Qui illorum uerbis falsis acceptor fui,
Qui omnia se simulant scire neque quicquam sciunt.
Quod quisque in animo habet aut habiturust, sciunt:
Sciunt quid in aurem rex reginae dixerit:
Sciunt quod Iuno fabulatast cum Ioue:
Quae neque fuerunt neque sunt, tamen illi sciunt.
Falsone an uero laudent, culpent quem uelint,
Non flocci faciunt, dum illut quod lubeat sciant.
Omnes mortales hunc aiebant Calliclem

Appendix, No. 8.

General Class Examination.

Indignum ciuitate ac sese uiuere,
Bonis qui hunc adulescentem euortisset suis.
Ego de eorum uerbis famigeratorum insciens
Prosului amicum castigatum innoxium.
Quod si exquiratur usque ab stirpe auctoritas,
Vnde quid auditum dicant: nisi id adpareat,
Famigeratori res sit cum damno et malo:
Hoc ita si fiat, puplico fiat bono.
Pauci sint faxim qui sciant quod nesciunt,
Occlusioremque habeant stultiloquentiam.

PLAUTUS, *Trinum.*, i. 2, 199–222.

Explain the following expressions:

Multas res *simitu* in meo corde vorso—
Ab re consulit—
Ibi illa *pendentem ferit*—
Tuas res tibi habeto—
Sarta tecta tua praecepta usque habui—
Illum tibi *ferentarium* esse amicum inventum intelligo—
Sine sacris hereditas.

III.—Translate into Latin lyric verse:

When the British warrior queen,
Bleeding from the Roman rods,
Sought, with an indignant mien,
Counsel of her country's gods.

Sage beneath the spreading oak
Sat the Druid, hoary chief;
Every burning word he spoke
Full of rage and full of grief.

"Princess! if our aged eyes
Weep upon thy matchless wrongs,
'Tis because resentment ties
All the terrors of our tongues.

"Rome shall perish—write that word
In the blood that she has spilt;
Perish, hopeless and abhorred,
Deep in ruin as in guilt."

THIRD AND FOURTH YEAR STUDENTS.

Translate, adding brief notes when you think it necessary:

1. Omninoque omnes clari et nobilitati labores continuo fiunt etiam tolerabiles. Videmusne apud quos eorum ludorum, qui gymnici nominantur, magnus honos sit, nullum ab iis, qui in id certamen descendant, devitari dolorem? apud quos autem venandi et equitandi laus viget, qui hanc petessunt, nullum fugiunt dolorem. Quid de nostris ambitionibus, quid de cupiditate honorum loquar? quae flamma est per quam non cucurrerunt ii, qui haec olim punctis singulis colligebant? Itaque semper Africanus Socraticum Xenophontem in manibus habebat: cuius in primis laudabat illud, quod diceret eosdem labores non aeque graves esse imperatori et militi, quod ipse honos laborem leviorem faceret imperatorium. Sed tamen hoc evenit ut in vulgus insipientium opinio valeat honestatis, quum ipsam videre non possint. Itaque fama et multitudinis iudicio moventur, quum id honestum putent, quod a plerisque laudetur.—CICERO, *Tusc. Disp.* ii. 26.

2. Haec fere hoc tempore putavi esse dicenda. Sed tu fortasse in sententia permanes.

A. Minime vero, meque biduo duarum rerum, quas maxime timebam, spero liberatum metu.

M. Cras ergo ad clepsydram: sic enim duximus, et tibi hoc video non posse deberi.

A. Ita prorsus. Et illud quidem ante meridiem, hoc eodem tempore.

M. Sic faciemus tuisque optimis studiis obsequemur.

Ibid, ii. 27.

3. Est praeclara epistola Platonis ad Dionis propinquos, in qua scriptum est his fere verbis: "Quo quum venissem, vita illa beata, quae ferebatur, plena Italicarum Syracusiarumque mensarum, nullo modo mihi placuit, bis in die saturum fieri nec umquam pernoctare solum caeteraque quae comitantur huic vitae, in qua sapiens nemo efficietur umquam, moderatus vero multo minus. Quae enim natura tam mirabiliter temperari potest?" Quo modo igitur iucunda vita potest esse, a qua absit prudentia, absit moderatio? Ex quo Sardanapalli, opulentissimi Syriae regis, error agnoscitur, qui incidi iussit in busto:

Haec habeo, quae edi quaeque exsaturata libido
Hausit: at illa iacent multa et praeclara relicta.

—Quid aliud, inquit Aristoteles, in bovis, non in regis sepulcro inscriberes? Haec habere se mortuum dicit, quae ne vivus quidem diutius habebat quam fruebatur.—*Ibid.* v. 35.

Translate into Latin:

My conviction and my opinion is this, that, as there are so many arts, so many sciences, so many inventions, such rapidity of thought, such recollection of the past and such memory of the future, the principle which involves all these cannot be mortal; and that as the mind is in perpetual motion, and admits no external cause of that motion, because it moves itself, it can never cease its motion, because it can never part from itself. Since, also, the constitution of the mind is uniform, and contains no foreign or heterogeneous element, it can never divide itself; and as it cannot do this, it can never die; and the circumstance that children, even while learning difficult branches of knowledge, seize upon their numberless details so quickly that they seem not so much to hear them for the first time as to recall and recollect them, is a satisfactory proof that man possesses much knowledge before his birth. Such is the doctrine of our friend Plato.

Translate, adding brief notes when you think it necessary:

1. Quartum idus Ianuarias, foedum imbribus diem, tonitrua et fulgura et caelestes minae ultra solitum turbaverant. observatum id antiquitus comitiis dirimendis non terruit Galbam quo minus in castra pergeret, contemptorem talium ut fortuitorum: seu quae fato manent, quamvis significata, non vitantur. apud frequentem militum contionem imperatoria brevitate adoptari a se Pisonem more divi Augusti et exemplo militari, quo vir virum legeret pronuntiat. ac ne dissimulata seditio in maius crederetur, ultro adseverat quartam et duoetvicensimam legiones, paucis seditionis auctoribus, non ultra verba ac voces errasse et brevi in officio fore. nec ullum orationi aut lenocinium addit aut pretium. tribuni tamen centurionesque et proximi militum grata auditu respondent: per ceteros maestitia ac silentium, tanquam usurpatam etiam in pace donativi necessitatem bello perdidissent.—Tacitus, *Hist.* i., 18.

Explain the use of *tanquam* in the last sentence.

2. Munia imperii Caecina ac Valens obibant, olim anxii odiis, quae bello et castris male dissimulata pravitas amicorum et fecunda gignendis inimicitiis civitas auxerat, dum ambitu comitatu et immensis salutantium agminibus contendunt comparanturque, variis in hunc aut illum Vitellii inclinationibus: nec umquam satis fida potentia, ubi nimia est; simul ipsum Vitellium, subitis offensis aut intempestivis blanditiis mutabilem, contemnebant metuebantque. nec eo segnius invaserant domos hortos opesque imperii, cum flebilis et egens nobilium turba quos ipsos liberosque patriae Galba reddiderat, nulla principis misericordia invarentur. gratum primoribus civitatis etiam plebs adprobavit, quod reversis ab exilio iura libertorum concessisset, quamquam id omni modo servilia ingenia corrumpebant, abditis pecuniis per occultos aut ambitiosos sinus, et quidam in domum Caesaris transgressi atque ipsis dominis potentiores.—*Ibid.* ii., 92.

3. Explain the following passages:

Procurationes alii et interiorem potentiam [adepti sunt]. Describe the administrative machinery of the several provinces.

Inde ad miliarium aureum pergit.

Repetundarum criminibus sub Claudio ac Nerone ceciderant: placuit ignoscentibus verso nomine, quod avaritia fuerat, videri majestatem, cujus tum odio

Appendix, No. 8.

General Class Examination.

etiam bonæ leges peribant. What is the full designation of the crime here called *majestas?* Point out the successive modifications which the law of treason underwent.

Fuere qui proficiscenti Othoni moras religionemque nondum conditorum ancilium adferrent.

Precibus et igne puro altaria adolentur.

Othoni sepulchrum exstructum est modicum et mansurum.

Magna et misera civitas, eodem anno Othonem et Vitellium passa, inter Vinios Fabios Icelos Asiaticos varia et pudenda sorte agebat. The names here used are representative.

MODERN LANGUAGES.—*Examiner, Professor Meissner.*

FIRST YEAR STUDENTS.

Translate into English:

I.—On a longtemps discuté sur la durée probable de la vie humaine; et les *moyennes* que la science et la statistique en ont données tour à tour ont varié suivant les époques. "En général, disait Voltaire, l'âge commun auquel l'espèce humaine est rendue à la terre, dont elle sort, est de vingt-deux à vingt-trois ans tout au plus, selon les meilleurs observateurs. De mille enfants nés dans une même année, les uns meurent à six mois, les autres à quinze; celui-ci à dix-huit ans, cet autre à trente-six, quelques-uns à soixante; trois ou quatre octogénaires, sans dents et sans yeux, meurent après avoir souffert quatre-vingts ans. Prenez un terme moyen: chacun a porté son fardeau vingt-deux ou vingt-trois années." Ainsi vingt-deux ans en moyenne, voilà ce que Voltaire accordait à l'humanite il y a un siècle. Il est vrai qu'il en parlait bien à son aise. Quand il marquait ainsi la limite de la vie humaine, Voltaire approchait de quatre-vingts ans, et il n'avait jamais eu plus d'esprit. De son côté Buffon disait, presqu'au même temps, que la vieillesse est *un préjugé*; que si nous nous sentons vieillir, c'est la faute de *notre arithmétique*. "L'homme qui ne meurt pas de maladie, ajoutait-il, vit partout quatre-vingt-dix ou cent ans."—CUVILLIER-FLEURY.

Translate into French:

II.—My sister and brother are attentive. Bring me some hot water. I am pleased with your answer. Why have these soldiers been punished? Because they have deserved it. Which are the most useful animals? Horses, oxen, asses and sheep. Why do you prefer this book to mine? Because it is better written. Is Paris as large as London? No; London is the largest town in the world. How is your brother? He is very well.

III.—The mind of Frederic William was so ill regulated, that all his inclinations became passions, and all his passions partook of the character of moral and intellectual disease. His parsimony degenerated into sordid avarice. His taste for military pomp and order became a mania, like that of a Dutch burgomaster for tulips.—MACAULAY.

IV.—A very curious circumstance took place in the kingdom of Denmark, in the middle of the last century, relative to the infliction of capital punishments upon malefactors. They were attended from the prison to the place of execution by priests, accompanied by a very numerous procession, singing psalms, etc.: which ended, a long discourse was addressed by the priest to the culprit, who was hung as soon as he had heard it. This spectacle, and all the pious cares bestowed upon the criminals, so far seduced the imaginations of the common people, that many of them committed murder purposely to enjoy such inestimable advantages, and the government was positively obliged to make hanging dull as well as deadly, before it ceased to be an object of popular ambition.—SYDNEY SMITH.

V.—(*a*) Give the 2nd pers. pl. pres. indic. of *dire, valoir, changer, se souvenir faire, mourir.*

(*b*) The 3rd pers. sing. prét. } of the same verbs.
(*c*) The 1st pers. pl. fut. }

Appendix, No. 8.

General Class Examination.

Translate into English:

I.—Indem, wie ich mich so umsehe, kommt ein köstlicher Reisewagen ganz nahe an mich heran; der mochte wohl schon einige Zeit hinter mir drein gefahren sein, ohne daß ich es merkte, weil mein Herz so voller Klang war, denn es ging ganz langsam, und zwei vornehme Damen steckten die Köpfe aus dem Wagen und hörten mir zu. Die eine war besonders schön und jünger als die andere, aber eigentlich gefielen sie mir alle beide. Als ich nun aushörte zu singen, ließ die ältere still halten und redete mich holdselig an: „Ei lustiger Gesell, Er weiß ja recht hübsche Lieder zu singen."—Eichendorff.

II.—Als die Latiner aus Lavinium
Nicht mehr dem Sturm der Feinde hielten Stand,
Da hoben sie zu ihrem Heiligthum,
Dem Speer des Mavors, flehend Blick und Hand.

Da sprach der Priester, der die Lanze trug:
„Euch künd ich statt des Gottes, der euch grollt:
„„Nicht wird er senden günstgen Vogelflug,
Wenn ihr ihm nicht den Weihefrühling zollt.""

„Ihm sei der Frühling heilig!" rief das Heer,
„Und was der Frühling bringt, sei ihm gebracht!"
Da rauschten Fittiche, da klang der Speer,
Da ward geworfen der Etrusker Macht.

Uhland.

Translate into German:

III.—Do you learn German? What would you say, if he asked you? The enemy has bombarded the town. I have not met him anywhere. Have you seen him? We have drunk two kinds of wine. I have been four times in Germany. The prince thanked most graciously. He lives on the other side of the river. It struck seven when we arrived in town. A little garden is before the house. Lend me your grammar, I have mislaid mine. When do you rise? I generally rise at seven o'clock. May I use your pen? What am I to do? All men must die. Our rich neighbour has a numerous family. Has he sung this new song?

IV.—(*a*) Give the inf., imperf., and past part. of *to know* (2), *to carry*, *to fly*, *to succeed*, *to enjoy*.

(*b*) Decline Mein guter Vater, das kleine Kind.

(*c*) Explain and exemplify the construction of the verbs of mood.

Second Year Students.

Translate into English:—

I.—M. Dumas a trop écrit, c'est là le plus grand de ses torts littéraires, et on se trouve ici amené à toucher au défaut de l'homme et plus encore du temps, parce qu'il a été la source des défauts de l'écrivain. Cet auteur a été trop de son siècle, il a eu de trop vastes besoins. Ne faut-il pas mener la grande vie, bâtir des châteaux, donner des dîners à grands spectacles, fonder des théâtres, voyager en Espagne, naviguer vers l'Afrique, jeter l'argent par les croisées pour en finir plus vite? Par suite, au lieu de faire servir l'art au triomphe de la vérité, ce qui est le but des grandes âmes; au lieu même de faire de l'art pour l'art, ce qui rend encore l'esprit difficile sur ces propres œuvres, ne faut-il pas faire de l'art pour de l'argent, ce qui est la pire des conditions du travail intellectuel? Etre tout à tous, écrire sur toute chose et à toute heure, rédiger aujourd'hui les mémoires d'un maréchal de France, demain un feuilleton sur la Ligue, après demain le récit d'un épisode de guerre civile, et, avant la fin de la journée, passer à un roman moderne, sauf à ébaucher pendant la nuit une pièce de théâtre; être obligé de mettre un prix vénal à chaque minute de son temps; réaliser le miracle de l'ubiquité littéraire, en tendant toutes les facultés de son esprit vers la solution de cet unique problème: "Gagner, le plus rapidement possible, la plus grosse somme d'argent," condition excellente pour produire beaucoup de livres, détestable pour produire de bons livres!—Nettement.

Appendix, No. 8.

General Class Examination.

Translate into French:—

II.—The most absurd notions were entertained in England respecting the wealth of India. Nobody seemed to be aware of what, nevertheless, was most undoubtedly the truth, that India was a poorer country than countries which in Europe are reckoned poor, than Ireland, for example, or than Portugal.—MACAULAY.

III.—Enormous crimes are not subjects on which it is desirable to stimulate curiosity, and had the assassination of Darnley been no more than a vulgar act of wickedness, had the mysteries connected with it, and the results arising from it, extended only to the persons, the motives, and the escape or punishment of the perpetrators or their accessories, it might have remained a problem for curious speculation, but it would neither have deserved nor demanded the tedious attention of the historian. Those events only are of permanent importance which have either affected the fortunes of nations, or illustrated, in some signal manner, the character of the epochs at which they have occurred.—J. A. FROUDE.

IV.—(*a*) Give a summary, in French, of either Corneille's *Cid*, or *L'Avare* of Molière.

(*b*) Give an account of Boileau.

Translate into English:—

I.—Man darf die Thatſache nicht verkennen, daß ſeitdem Carl IV ſeinen Sitz in Böhmen aufgeſchlagen, mehr als ein Jahrhundert lang kein Kaiſer mit eigenthümlicher Kraft im Reiche auftrat. Von Carls Nachfolger Wenzlaw hat man es in Deutſchland eine geraume Zeit hindurch gar nicht erfahren daß ihn die Böhmen gefangen hielten; ein einfaches Decret der Churfürſten reichte hin, ihn abzuſetzen. Ruprecht von der Pfalz entgieng wohl nur durch den Tod einem ähnlichen Schickſal. Als derjenige Fürſt, welcher nach mancherlei Wahlentzweiungen den Platz behielt, Siegmund von Luxenburg, vier Jahre nach ſeiner Wahl endlich im Reiche erſchien, um ſich krönen zu laſſen, fand er ſo wenig Theilnahme, daß er einen Augenblick im Begriff war, unverrichteter Dinge nach Ungern zurückzugehn.

Ranke.

II.—Es geſchehn noch Wunder—eine weiße Taube
Wird fliegen und mit Adlerskuhnheit dieſe Geier
Anfallen, die das Vaterland zerreißen.
Darniederkämpfen wird ſie dieſen ſtolzen
Burgund, den Reichsverräther, dieſen Talbot,
Den himmelſtürmend hunderthändigen,
Und dieſen Sal'sbury, den Tempelſchänder,
Und dieſe frechen Inſelwohner alle
Wie eine Heerde Lämmer vor ſich jagen.
Der Herr wird mit ihr ſeyn, der Schlachten Gott.
Sein zitterndes Geſchöpf wird er erwählen,
Durch eine zarte Jungfrau wird er ſich
Verherrlichen, denn er iſt der Allmächt'ge!

Schiller.

Translate into German:—

III.—I should like to know it. Do you like red wine better than white? *Are you sure* you have considered well what you advise me? I am just writing to my cousin. You succeed in everything. We were preparing for the journey, when we received the news of the sudden death of a near relation. A statue of marble has been erected to the memory of the poet.

IV.—Cortes was a man of insatiable activity. It might have been thought that, after the conquest of Mexico, the rebuilding and repeopling of the city would have sufficiently exhausted the energies even of that active man. But it was not so. He is chiefly known to the world by that conquest of Mexico, which, for its audacity, stands unrivalled in the annals of mankind; but he was subsequently employed in further conquests, which cost him far more labour

and suffering, but have hardly added at all to his renown, so little time and thought can men spare for a thorough investigation of the lives and deeds of even their most remarkable fellowmen.—HELPS, *Hist. Conq.*, iii. 236.

Appendix, No. 8.

General Class Examination

THIRD YEAR STUDENTS.

I. Translate into French:—

The philosophy of history, which resolves events into the action of organic and necessary laws, conceals from us the perplexities of the living instruments by which those events were brought about. We see what actually happened; we imagine that we discern the causes which determined the effects; and, in assuming a necessary connexion between them, we smile at the needless fears, we ridicule the needless precautions of kings and ministers; we despise them as short-sighted; we censure them as arbitrary and tyrannical; failing to perceive, or else failing to acknowledge, that if the results were inevitable, the characters which assisted to produce those results were inevitable also. By a subtle process of intellectual injustice, we convert the after-experience of facts into principles of reasoning which would have enabled us to foresee those facts; and we infer, with unconscious complacency, the superiority of modern intelligence. "Knowledge of the result," a wise man once observed, "has spoilt the composition of history." A just moral appreciation of character is made impossible by it. The remedy, so far as there is a remedy, is to look wherever we can through the eyes of contemporaries from whom the future was concealed.—J. A. FROUDE.

II.—Write a philological commentary on the following passage:—

Au tans jadis ancienor
Ert li siecles de grant valor,
Et li roi et li emperere
Faisoient chiere et bel here
Et tenoient ferme justise
Sans lo ier et sans convoitise;
Chevalerie n'ert pas morte . .
Chà en arrière estoit uns rois
Ki mult ert sages et cortois
Et prist feme gentil pucele,
Fille à un roi, qui mult fu bele.
Ensanle furent longement;
Et bien et bel et loiaument
Li uns à l'autre bien se tint.
Or oies comment lor avint:

III.—(*a*) Give an account, in French, of the *Les Serments de Strasbourg*, *La Cantilène de Ste Eulalie*, and the *Fragment de Valenciennes*.

(*b*) Explain the chief difference between the Old and Modern French Declension.

(*c*) State Grimm's Law as applied to the Romance languages, and compare the permutations, especially of the Mutae, with the corresponding changes in the Teutonic languages.

Translate into English:—

I.—Endlich erschien der Pfarrer in bürgerlicher Kleidung, er hielt die schwarzeingebundene Bibel und das Meßbuch mit der linken Hand auf die Brust gedrückt; gesenkten Blickes, ohne aufzuschauen, schritt er durch die Versammelten, die sich vor ihm zertheilten; plötzlich schien ein Entschluß seinen Schritt zu hemmen, er warf seiner Gewohnheit nach den Kopf nach hinten, richtete das Antlitz aufwärts und schloß die Augen. Von allen Seiten wurde Stille gerufen und der Pfarrer sprach:

„Meine lieben Christen!" die Stimme schien ihm zu stocken, man sah, er arbeitete mit aller Macht um Athem, nur zu den nächsten Umstehenden sagte er: „Ich bitte um Geduld, ich werde mich gleich fassen." Man hörte es indeß allerwärts, und nach einer Weile fuhr er laut fort, die Hand hoch emporstreckend.—Auerbach.

Appendix, No. 8.

General Class Examination.

Translate into German:—

II.—Negro slavery, in theory, was an invention of philanthropy,—like the modern Coolie trade, an unobjectionable and useful substitute for the oppression of races to whom loss of freedom was death; yet with the fatal blot in the design, that the consent of the negroes themselves, who were so largely interested in the transaction, was neither sought nor obtained. The original and innocent pretext, which confined the purchase to those who had offended against the negro laws, melted swiftly before the increase of the demand; the beads, the scarlet cloaks and ribands which were fluttered in the eyes of the chiefs, were temptations which savage vanity was unable to resist; they sold their own people; they made war on one another to capture prisoners, which had become a valuable booty; and the river mouths and harbours, where the Portuguese traders established their factories, were envenomed centres from which a moral pestilence crept out among the African races. The European first converted the negro into a savage, and then made use of his brutality as an excuse for plunging him into slavery.—J. A. Froude.

III.—Write, in German, a short account of Goethe's life at Leipzig and Strassburg.

History.—*Professor Yonge.*

QUESTIONS.

1. Give a very brief account of Simon de Montfort (the grandson), of Etienne Marcel, of Lord Clarendon, and of the Duke of Marlborough.
2. What statutes were passed by our Plantagenet Kings, and what by the French Kings of the 13th and 14th centuries, to limit the temporal power of the Pope in their respective dominions?
3. What French King established the States General, and what was the power of that body?
4. What was the composition and power of the French Parliament?
5. Give a brief account of the Battles of Sluys, of Marston Moor, and of the Nile.
6. Give a brief account of the Petition of Rights, and of the Bill of Rights, mentioning those statesmen who bore the chief part in the framing of each.
7. What was the object of the Exclusion Bill?
8. Give a brief account (not exceeding one page) of any event which has made the greatest impression on your mind or fancy in the periods of either English or French history which have been the subjects of the lectures of this session.

Mathematics.—*Professor Purser.*

First Year Students.

ALGEBRA.

1. Solve the equations $\frac{x-2}{2}+\frac{x-3}{3}+\frac{x-4}{4}=1$.

$$\left.\begin{aligned} x+\frac{y}{2}&=\frac{19}{2}\\ y-\frac{x}{2}&=\frac{3}{2}\end{aligned}\right\}$$

2. Define an arithmetic series and a geometric series. Place three arithmetic means between 5 and 10, and three geometric means between 2 and 162.

3. Shew that if a be a value of x which satisfies the equation $x^2+px+q=0$, the left hand member of that equation is divisible without a remainder by $x-a$.

4. Solve the equations $x+\frac{1}{x}=\frac{13}{6}$, $x+\sqrt{x+2}=\frac{7}{4}$.

5. Prove that if $x^m x^n = x^{m+n}$ for all values of m and n, x^{-1} and $x^{\frac{1}{3}}$ must denote $\frac{1}{x}$ and $\sqrt[3]{x}$. *Appendix, No. 8.*

General Class Examination.

6. Prove that $\log(xy) = \log x + \log y$. Given $\log 2 = \cdot 30103$; $\log 3 = \cdot 47712$; find $\log 6$, $\log 30$, and $\log \frac{27}{64}$.

7. Given $\cos 2\theta + m \sin 2\theta = \cos\theta + \sin\theta$, find $\tan\theta$.

8. Shew that if $x + y$ is given; $x^p y^q$ is greatest when $\frac{x}{p} = \frac{y}{q}$, when x, y, p, q, are all positive quantities.

9. Find the condition that $a x^2 + b x + c = 0$, $a' x^2 + b' x + c' = 0$ should have a common root.

10. Prove Fermat's theorem—that if n be a prime number, and N prime to n, $N^{n-1} - 1$ is divisible by n.

11. Assuming the series for e^x, investigate the series for $\log_e(1+x)$. Calculate to three decimal places $\log 2$ in the Naperian system.

12. Give the series $A - B + C - D +$ &c.: shew that if the successive terms A, B, C, &c., and also their successive differences $A - B$, $B - C$, &c., diminish continuously and indefinitely the series converges to a limit lying between $\frac{1}{2}$ A and $A - \frac{1}{2}B$.

13. A given number of students take their places at random in an examination hall which exactly holds them. The examination consists of a morning and and an afternoon session. What is the probability that at least one of the students occupies in the afternoon the same place he did in the morning.

14. Investigate in what degree the result of eliminating x between two equations contains the co-efficients of each. Discuss briefly some of the different methods by which this elimination may be effected.

CONIC SECTIONS.

[The propositions to be proved Geometrically.]

1. The external angle between two tangents at a parabola is equal to the angle which either of them subtends to the focus.

2. The locus of the middle points of a system of parallel chords of a conic is a right line.

3. Ordinates drawn from the same point in the axis to the ellipse and auxiliary circle bear to one another a constant ratio.

4. If a variable point on a conic be joined to four fixed points the anharmonic ratio of the pencil is constant.

5. A perpendicular S Y let fall from the focus S upon a tangent to an ellipse, bears a fixed ratio to the distance of Y from the foot of the corresponding directrix.

6. Prove that the locus of the centre of a circle touching two given circles, one of which lies inside the other, is an ellipse of which the centres of the given circle are the foci.

GEOMETRY AND TRIGONOMETRY.

1. If a tangent be drawn to a circle, and through the point of contact a chord be drawn cutting the circle, the angles which the chord makes with the tangent are equal to the angles in the alternate segments.

2. About a given circle to describe a triangle equiangular with a given triangle.

3. Triangles having the same altitude are to one another as their bases.

4. Prove that $\cos(A+B) = \cos A \cos B - \sin A \sin B$. Hence calculate $\cos 75°$.

5. Give $\tan A = -\frac{3}{4}$, find $\sin A$, $\cos A$, and $\tan 2A$.

6. Assuming the formula for the cosine of an angle of a triangle in terms of the sides, prove that $\cos\frac{A}{2} = \sqrt{\frac{s.(s-a)}{b\,c}}$

Appendix, No. 8.

General Class Examination.

7. I observe that the angle of elevation of the top of a tower is 23°, and in moving a hundred feet nearer that its angle of elevation is 31°; calculate the heighth of the tower.

L sin 23° = 9·59188	L sin 31° = 9·71184
L sin 8° = 9·14356	log 144.60 = 2·16016

8. Show that to draw a triangle which shall be at the same time inscribed in one given circle and circumscribed to another, is either indeterminate or impossible.

9. A line is drawn through a given point across the legs of a given angle, find the relation which subsists between its segments.

10. Assuming De Moivre's theorem, investigate the series for $\sin \theta$ in terms of θ.

11. Prove the formula $\frac{\pi}{4} = 4 \tan^{-1} \frac{1}{5} - \tan^{-1} \frac{1}{239}$ apply it to calculate π to 5 places of decimals.

12. Prove that $\log \sin \theta = \log \theta + \frac{1}{3} \log \cos \theta$ approximately when θ is a small arc. Explain the use Maskelyne made of this formula.

13. Sum the series—

$$\frac{1}{\sin x} + \frac{1}{\sin 2x} + \frac{1}{\sin 4x} \text{ to } n \text{ terms.}$$

14. Given $a \cos \theta - b \cos \phi$, prove that $a \sin \theta + b \sin \phi$ is greatest when $\theta + \phi = \pi$. Apply this to find the quadrilateral of given sides and maximum area.

15. Find trigonometric expressions for the three roots of the equation $x^3 - 9x - 9 = 0$.

Second Year Students.

Analytical Geometry, &c.

1. Explain by a diagram the position of the lines whose equations referred to rectangular co-ordinates are respectively $2x - 3y = 6$; $x + 5y = 5$. Find the tangent of the angle between them.

2. Investigate the equation of a circle whose radius = 3, and which touches the axis of x at the origin.

3. Find the equation of the tangent to the circle $x^2 + y^2 = r^2$ at the point $x'y'$. Show from the form of the equation that the tangent is perpendicular to the radius. Prove that the same equation represents the polar when the point $x'y'$ is not on the circle.

4. Find the condition that the line—

$$\frac{x}{A} + \frac{y}{B} = 1 \text{ touch the ellipse } \frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

5. Investigate the condition that the general equation of the second degree represent a pair of right lines.

6. Find in trilinear co-ordinates the equation of the circle circumscribing the triangle $\alpha \beta \gamma$. Interpret the equation geometrically.

7. Find the locus of the middle points of the portions of tangents to an ellipse intercepted by the axes of the curve.

8. Investigate by the method of infinitesimals the direction of the tangent (1) of an ellipse (2) of a curve the locus of a point such that the rectangle under its distances from two fixed points is constant.

9. Examine the condition that the line—

$x \cos \alpha + y \sin \alpha = p$ cut the conic $\frac{x^2}{a^2} + \frac{y^2}{c^2} = 1$ at one of its intersections at an angle ω.

10. Find the ellipse of greatest eccentricity for which it is possible to draw two normals at right angles meeting on the curve.

11. Prove that in an ellipse the parameter of the most closely osculating parabola at any point varies inversely as the cube of the central radius vector.

Differential and Integral Calculus.

1. Investigate from first principles

$$\frac{d}{dx}(x^5) \qquad \frac{d\cos x}{dx} \qquad \frac{d}{dx}\left(\frac{1}{x}\right)$$

2. Differentiate

$$\log(1+x^2) \qquad \tan^{-1}(e^x) \qquad \sqrt{x^2-a^2}$$

3. Prove that $u=2x^3-9x^2+12x$ is a maximum when $x=1$, and a minimum when $x=2$.

4. Find the limiting value of $\frac{a^x-a^{-x}}{\sin x+\tan x}$ when $x=0$.

5. Prove that $\frac{d^n}{dx}(e^{ax}\cos bx) = (a^2+b^2)^{\frac{n}{2}}\cos(bx+n\phi)e^{ax}$ when $\phi = \tan^{-1}\frac{b}{a}$.

6. Apply the differential calculus to the solution of the following problem: two lines containing a given angle revolve round their point of intersection, in what position is the area of the quadrilateral they form with two other fixed lines greatest or least?

7. Find the envelope of the line $\frac{x}{m}+\frac{y}{n}=1$ when m and n are subject to the condition $\frac{1}{m^2}+\frac{1}{n^2}=\frac{1}{c^2}$.

8. Apply Maclaurin's theorem to the expansion in a series of $\log(1+x)$ and of $\sin x$.

9. Prove the expression for the radius of curvature—

$$R = \frac{\left\{u^2+\left(\frac{du}{d\theta}\right)^2\right\}^{\frac{3}{2}}}{u^3\left(u+\frac{d^2u}{d\theta^2}\right)} \text{ where } u=\frac{1}{r}.$$

Apply this formula to the curve $u=a(e^{\theta}+e^{-\theta})$.

Integral Calculus.

1. Required the following integrals:—

$$\int\frac{dx}{4+x^2} \qquad \int\frac{dx}{\sqrt{3+x^2}} \qquad \int\frac{dx}{x^2-9}$$

2. Prove that the volume of a cone is one-third of the volume of the cylinder having the same base and the same altitude.

3. Required—

$$\int\frac{dx}{(1-x^2)^{\frac{3}{2}}} \qquad \int\frac{dx}{1+2\sin x} \qquad \int\frac{x^2\tan^{-1}x.\,dx}{1+x^2}$$

4. Investigate under what circumstances

$\int x^{m-1}(a+bx^n)^{\frac{p}{q}}dx$ can be reduced to a rational form.

5. Obtain a formula of reduction for the integral

$$\int\frac{dx}{x^m\sqrt{a^2-x^2}}$$

6. Find the whole area comprised by the evolute of the ellipse.

Appendix, No. 8.

General Class Examination.

Natural Philosophy—*Examiner, Professor Stavelly.*

Second Year Arts and First Year Engineering.

NATURAL PHILOSOPHY (PASS).

1. Explain what is meant by "the inertia" of a body, what distinguishes that property from the weight or gravity of the body, and state the experimental proofs that matter is inert.

2. Describe the three states in which matter is found to exist. Exemplify these three states in the case of mercury.

3. Describe the pneumatic trough. Explain its use to the chemist, and state how a gas contained in its receiver is brought to its constitution under atmospheric pressure,

4. Explain what is meant by the centre of gravity of a body, and state the position of the centre of gravity of a uniformly dense pyramid, and of a cone.

5. Explain what description of motion can alone be communicated to a perfectly free body by a force whose direction passes through its centre of gravity, and give your reasons for what you assert.

6. Describe the Stanhope combination of levers, and state the two chief advantages obtained by its use.

7. Describe Attwood's machine. Explain how by it bodies are experimentally shewn to have inertia, and how by it the two leading propositions regarding falling bodies are proved experimentally.

8. State the distinction between the simple and the compound pendulum, and enunciate the law of the pendulum.

9. Explain why the accelerating force of gravity is not of the same amount at all parts of the surface of the earth, and state how it is found to vary.

10. Explain what is exactly meant when we assert that the free surface of a heavy liquid must be everywhere on the same hydrostatic level, and describe the experimental proof of this truth.

11. Explain how it is experimentally proved that air has weight, and describe the method of determining the specific gravity of an air or gas.

12. Explain the physical distinction between water at 212° Fahrenheit, and steam or vapour of water at the same temperature, and under standard atmospheric pressure.

Second Year Arts and Second Year Engineering.

NATURAL PHILOSOPHY (HONORS.)

1. Prove that if the moments of two forces applied together to the same point of any body be equal and opposite with respect to any point in the plane of those forces, the line which joins the point of application of these forces with that latter point is the direction of the equivalent of these forces taken in the same direction as that in which the forces act.

2. Define the constituent forces of a couple, the arm of a couple, the moment of a conple, and the axis of a couple.

3. Prove that a couple acting on any rigid body may be transferred, with an equivalent effect, to any plane in that body parallel to its own plane.

4. Enunciate the theorem by which the position of the centre of gravity of a body of given form, dimensions, and constitution as to density, may be determined algebraically. Demonstrate its truth, and explain how it is applied.

5. Deduce the formula which gives the relation between the accelerating force of gravity at any part of the earth, the distance fallen through small ranges from rest, and the time occupied in describing those spaces from rest.

6. Show that a heavy body would describe any smooth cord of a vertical circle which is coterminous with its vertical diameter in the same time that it would fall freely down that vertiaal diameter.

7. Deduce the formula by which the length of a pendulum of given form, dimension, constitution as to density, and oscillating on a given axis of suspension is determined.

8. State the property of the centre of oscillation of a pendulum by which the

length of a given pendulum can be most easily determined. Prove that property, and show how by the aid of such a pendulum the accelerating force of gravity at any place on the earth's surface can be obtained experimentally.

9. Prove that the total pressure exerted upon any surface, plane or curved, is equal to the weight of a column of fluid of the same constitution as to density from bottom to top, whose base is the surface pressed, and whose height is equal to the depth at which the centre of gravity of that surface is below the free surface of the fluid.

10. Write down the formula which expresses the specific gravity of a rigid body of less specific gravity than standard water. Explain its terms and prove its truth.

11. Explain fully the method by which Kepler deduced from the observations of Tycho Brahe that each of the planets describes round the sun, in its own periodic time, an orbit very nearly an ellipse, the sun occupying one of its foci.

12. Explain what astronomers mean by "The Parallax" of a comparatively near celestial body. Define the "Horizonal Parallax," the "Diurnal Parallax," the "Parallax in Latitude," and the "Annual Parallax," and write down and prove the formula which gives the relation between the parallax, the apparent zenith distance, and the linear distance of the object and the observer from the centre of the earth.

Third Year Engineering and Coates' Prize.

NATURAL PHILOSOPHY APPLIED.

1. Enumerate the three classes to which all the resistances requiring to be overcome by machinery have been reduced, and specify the subdivisions of the second and third class.

2. To which of these subdivisions does the resistance opposed to the punching of holes in boiler plates belong? And what is the law which governs the amount of that resistance in different species of plates, and of various thicknesses and sized holes?

3. Enumerate the three laws of friction, and show that the third is a necessary consequence of the first and second as soon as their truth has been proved experimentally.

4. State the simplest method of determining by experiment the co-efficient of friction for any two surfaces that are required to work together, and prove the soundness of the method.

5. Investigate the mechanical aid a wheel gives to a force acting at its centre, parallel to the road, to enable it to lift the weight it carries over small obstacles. Point out the two limits to its aid, and show how the lower limit leads us to the aid it gives in overcoming friction of rolling.

6. Explain how the static (or dead pull) force of an animal can be experimentally determined, and how the dynamic force of the same animal is determined; and give the two formulas which have been proposed for expressing the relation of the magnitudes involved in the latter, together with the names of their respective proposers.

7. A rectangular block of freestone, whose specific gravity is 2·236, length 12 feet, breadth and depth 3 feet each, find the number of units of work expended in turning it over from lying horizontally on one of its long faces to one of its square ends.

8. A railway train, which has been proved when travelling through the air at the rate of 10 miles an hour, to be resisted by the air with a force equivalent to 30 lbs., and the united carriages of which weigh 80 tons. It is required to find the horse-power of the engine which causes it to travel at the rate of 40 miles per hour on a level rail.

9. A tilt-hammer which weighs 3 cwt. and is lifted 3·25 feet each lift, of which 70 take place in a minute, it is required to find the horse-power of the engine expended in working that hammer.

10. An engine of 6 horse-power raises 40 cwt. of coal per hour from a pit 250 fathoms deep, and at the same time works a forge hammer which makes 30 lifts per minute, each lift being 2·5 feet, find the weight of the hammer.

11. State the three most important improvements which Watt introduced into

Appendix, No. 8.

General Class Examination

the steam engine, as it was when he began his researches connected with it: and explain the leading advantages gained by each of them.

12. Explain the advantage gained by using steam expansively; point out the chief differences between the working of the Cornish Engine and the Crank Engine, and how the difficulty of using steam expansively with the latter is overcome.

(HONORS.)

13. Deduce a formula which would include all such questions as 9 and 10 (above) as particular examples, and at the same time might be used for calculating the value of any one of the magnitudes involved in such questions, which admit of being varied; when the particular values of all the others are given in a particular case.

14. Find the working velocity which will enable a given animal to perform the maximum of work, taking successively each of the formulæ referred to in No. 6 (above) as your guide.

15. Write down the formula which gives the gross work performed by a given stream of water moving with a given velocity perpendicularly against the float-boards of an undershot wheel. Find the relation of the variables which will ensure the maximum of work being performed.

16. Find the place at which the contact of the two pitch circles of the spur-wheel, and segment attached to an overshot water-wheel, working with a uniform velocity, should be placed in order that the loss by friction at the journals of the wheel itself should be the least possible.

CHEMISTRY.—*Examiner, Dr. Andrews.*

PASS QUESTIONS.

1. Describe the differential (air) thermometer, and explain the uses to which it is applied.
2. What is the relation between the height of the barometer and the boiling point of a liquid?
3. Describe the spectra of sodium and thallium.
4. How has the composition of water been determined?
5. Describe the method of liquefying carbonic acid and the chief properties of the liquid.
6. How is chlorine gas prepared, and what are its properties?
7. In what proportion do gases combine by volume.
8. Give an account of the chief compounds of lime.
9. What are the chief ores of iron—state their composition.
10. What are the tests for lime?

HONOR QUESTIONS.

1. How is the tension of a vapour determined, (*a*) for temperatures below the boiling point; (*b*) for temperatures above the boiling point?
2. Give an account of the method of proving experimentally that gases and vapours absorb a portion of the rays of heat emanating from low sources. State also the general results for different gases and vapours.
3. How is it proved that the capacity for heat of a permanent gas under the same volume, is different from its capacity under the same pressure.
4. How are the bright lines of the sodium flame shown to be identical with the dark lines of the solar spectrum?
5. What is the composition by volume of the following bodies; hydrochloric acid, water, ammonia, phosphuretted hydrogen, chloride of ammonium.
6. Give an account of the method of analysing atmospheric air.
7. What are the chief properties of ozone, and how is it shown to be heavier than oxygen?
8. Describe the preparation, and state the composition of the hydrofluosilicic acid.

9. How is silica separated from a siliceous mineral which is not attacked by hydrochloric acid.

10. What are the tests for lime and magnesia?

11. Give an account of the two oxides of copper—their composition, preparation, and uses.

12. What are the properties of the arsenious and arsenic acids?

13. Give an account of the unitary system, and illustrate the statement by examples.

14. What is the composition of aniline; state also its sources and uses?

15. What is the composition of chloroform, and how is it prepared?

16. Give an account of the theory of the Leyden jar and of the Condenser.

17. How is the presence of free electricity in the atmosphere demonstrated, and its character ascertained?

18. Explain fully the construction and theory of the induction machine.

CIVIL ENGINEERING.—*Examiner, Professor James Thomson.*

FIRST YEAR STUDENTS.

GEOMETRICAL DRAWING.

[NOTE.—The questions to which the word PASS is prefixed will be treated as of special importance towards passing, but will not be taken into account for Honors.]

1. (*Pass.*) Explain clearly what is meant in Descriptive Geometry by the following expressions:—*The projections of a point*:—*The projections of a line*:—*The projecting plane of a straight line*:—*The traces of a line*:—*The traces of a plane.*

2. (*Pass.*) Given the traces of two planes to find the projections of the common section of the planes, in the case in which the two planes do not meet the ground line in the same point, and the traces of the required line are accessible.

3. (*Pass.*) Given the traces of two planes to find the projections of the common section of the planes in the case in which the traces on the horizontal plane are parallel to one another, and those on the vertical plane intersect one another in an accessible point.

4. To find the projections of the intersection of two planes given by their traces in the case in which the traces on the vertical plane of projection intersect one another at an accessible point on that plane, while the traces on the horizontal plane of projection are not parallel, but would meet at a point so remote as to be inaccessible. You may find an easy solution by using an assumed vertical reference plane, parallel to the vertical plane of projection, and finding the traces of the given plane on that assumed plane.

5. (*Pass.*) In Descriptive Geometry, to draw through a given point a line parallel to a given straight line.

6. Supposing the traces of a plane and the projections of a point to be given, explain how to draw the projections of a line which passes through the given point, and is perpendicular to the plane; and how to find the length of the perpendicular intercepted between the point and the plane. Explanation without a diagram will suffice.

7. Explain the method taught in Hall's Descriptive Geometry for bisecting the angle between two straight lines given by their projections. The method intended is one in which the traces of both lines on one plane of projection are used.

8. How might the problem in the foregoing question be solved in cases in which it would be unmanageable to find the traces of both lines on either plane of projection; both or one of the traces being too far away?

9. To find the angle between two straight lines which intersect one another in the ground line;—their projections being given. You may observe that the method taught in Hall's Descriptive Geometry for finding the angle between two given lines will fail in this case. You may find a mode of solution by assuming a point in each of the given lines, conceiving these two points to be joined; and then constructing on the plane of delineation the triangle formed by the two given lines and the assumed line.

Appendix No. 8.

General Class Examination

10. What is meant in perspective by the "*centre of the picture*," which is also often called the "*centre of view*," on the supposition that to view the picture correctly the eye ought to be directed so as to look towards that point especially. Why is that supposition erroneous, and the name "centre of view" unsuitable? The same point is sometimes called the *point of view* or *point of sight*. Why are these two designations unsuitable?

11. Mention briefly the chief varieties of methods of drawing in perspective, taught in the course of the present Session, and explain clearly the method in which the horizontal and vertical projections of the visual rays are used, and the picture is oblique to the vertical plane of projection, and explain some other one of the methods also.

12. (*Pass.*) Show that in Descriptive Geometry two straight lines meeting the ground line not in the same point, cannot be the traces of a plane; or, in other words, that the two traces of a plane must meet the ground line in the same point.

13. On a vertical picture surface, given a perspective picture of a horizontal rectangle, and given the length and breadth of the rectangle, it is required to show how the proper point of view for the picture may be found.

14. On a vertical picture surface, given the perspective pictures of two horizontal rectangles, it is required to show how the proper point of view for the picture may be found.

15. Draw carefully and neatly an approximate ellipse made up of four quadrantal circular arcs of two lengths of radii. The minor axis is to be three-fourths of the length of the major axis.

16. Draw carefully and neatly an approximate ellipse made up of eight circular arcs of three lengths of radii, the minor axis being taken half the length of the major axis.

17. Show at least two methods of drawing a true ellipse, by finding numerous points of its circumference and joining them by a smooth curve.

18. Show how to find, for any point given by its projections, the shadow cast on any vertical surface, whether plane or curved, given by its horizontal trace, the light being supposed to fall in the direction usually adopted in engineering drawings.

19. Show how to solve the problem in the foregoing question in the more general case of having the light falling in any specified direction whatever.

20. Assume the projections of a horizontal thin circular plate or disk, in such a situation that itss hadow, cast by light falling in the direction usually assumed, shall fall on the vertifical plane of projection, and draw the shadow margin on that plane.

21. Explain the nature of isometric drawing, and show how to make an isometric drawing of a house, supposing its dimensions to be sufficiently given. In this you should explain the distinction between the isometric and the natural scale.

SECOND YEAR STUDENTS.

CIVIL ENGINEERING.

1. Given the projections of a sphere and the projections of a straight line which penetrates the sphere; show how to find the points in which the line cuts the surface of the sphere.

2. What is the error in square links per acre in a survey made with a chain which is four inches too long?

3. Give a demonstration proving that in Gravatt's Level the adjustment of the line of collimation, so as to make the instrument give level sights when the bubble of the longitudinal spirit tube is at middle, may be effected either by shifting the line of collimation itself or by shifting the spirit tube; or, in other words, that there is no exact place in the image field to which it is necessary that the horizontal wire of the diaphragm be brought by the pair of screws for raising and lowering the diaphragm.

4. Explain fully how to compute the area of a field surveyed by offsets from the sides of a rectilinear figure; the figure, when of more than three sides, being divided into triangles by measured lines. In order that the principal field

measurements and that the computations may be duly checked, what are the usual extra measurements and calculations to be made in the case of surveying with the chain without measurement of angles?

5. If a triangle is to be determined by measurement, in the field, of a side and two adjacent angles, and if the sum of those two angles be about equal to 90°, so that the third angle must also be about equal to 90°; find approximately enough for ordinary practical purposes how much the calculated length of each of the required sides will be vitiated (if practically vitiated at all) by an error of two minutes in one of the two measured angles; the calculated side adjacent to that slightly inaccurate angle coming out by the calculation as being 3,146 links.

6. Explain the principle of the vernier, and give a practical rule for finding how to read the indications of any vernier.

7. What is the relation, as to quantity, between the Statute Acre and the Irish Acre; and how does this depend on the lengths of the Statute Perch and the Irish Perch?

8. How may two persons in a field between two distant stations, quickly range themselves into the straight line between the stations without going to either of them; and how may a person with a theodolite between two distant stations, proceed to find the exact line between them without going to either; the visions to the stations not being obstructed in either case?

9. For an oblique bridge show how to draw the horizontal projection of the coursing spiral of the intrado indefinite, as to length (that is without reference to its terminating at the oblique faces) if the development of that spiral be given.

10. In an oblique bridge explain what is meant by the "adjusted angle of skewback of the intrado," and show how the adjustment is made.

11. By use of tables furnished to you, calculate the area of a triangle having its sides 2,356 links, 2,988 links, and 1,567 links; and give the result in square links.

12. Reduce 6,273,000 square links to acres, roods, and perches, statute measure; and also to acres, roods, and perches, Irish.

13. Given two sides of a triangle, 1,960 and 2,594 links respectively, and the contained angle 73° 22′. Calculate, by tables furnished to you, the third side.

14. In Bidder's Table of Earthwork what quantities do the two numbers inserted for each pair of end heights respectively express, and how are they used for finding the content of a prismoidal block of given dimensions.

15. Explain the nature of the sextant, and demonstrate the relation which subsists between the angle contained by the two mirrors and the angle contained by the two rays.

16. "The operation of levelling may be defined as the art of finding how much higher or lower any one point is than another, or, more properly, the difference of their distances from the centre of the earth." Show how this is both an unpractical and an erroneous recognition; and give a correct statement of what the art of levelling is, or what a level surface is.

17. Explain how to set out the half-breadths for a railway on sidelong ground.

SECOND AND THIRD YEAR STUDENTS, AND COATES' PRIZE.

OFFICE AND FIELD WORK.

1. In a landscape picture submitted to you, you will observe rays of light or bright lines in the sky drawn radiating in various directions, some downwards and some upwards from a cloud behind which the sun is hidden. Bearing in mind that the sun is above the horizon, and that his rays are therefore inclined downwards in coming towards the earth; explain the principles according to which the bright lines of somewhat hazy atmosphere illuminated by light proceeding from openings or indentations of a cloud may properly be drawn in that manner.

Also at sunrise or sunset, when the rays of the sun are almost exactly horizontal, an observer on the top of a hill may sometimes see the appearance of illuminated lines, like those in the picture submitted, radiating from a point, at about the horizon, directly opposite to the sun, from the observer. Explain how this can be.

Appendix, No. 8.

General Class Examination.

2. Explain briefly how to proceed to draw correctly the shadows in a perspective picture of an object, a house for instance, whose dimensions are fully given, together with any other necessary data, such as the positions of the object, the picture surface, and the point of view, and the direction of the light.

3. A straight line (which may be understood to be one edge of a straight ruler or other object) is placed perpendicular to the vertical plane of projection. and casts its shadow on a right circular cone with vertical axis. It is required to show how to construct the horizontal projection of the shadow cast on the surface of the cone: the line of shadow not being limited in length by any limitation of the extension either of the straight line casting the shadow, or of the conical surface receiving it. The light is to be supposed to fall in the direction usually assumed in engineering drawings.

4. For computation of earthwork along an entire cutting or embankment, whether will the ordinary prismoidal method, or the method of "mean areas" give generally more correct results, and why? Also explain whether either of them has an advantage over the other in respect to giving means for taking sidelong slopes into account.

5. Explain how to range a railway curve from one straight tangent to another, with the curvature introduced gradually in passing from each straight tangent into the main or circular bend of the curve; taking the case in which the point of intersection of the straight tangents is inaccessible, and using the method of angles at the circumference for ranging the main bend.

6. In respect to the transit theodolite, in testing the instrument by the striding level, 1st, one leg of the level may be longer than the other; 2nd, one journal (or trunnion) of the axis on which it has to be applied may be higher than the other; or 3rd, both these may be the case. Show how to discriminate among all these three cases, and how to effect the requisite adjustments in each of these cases.

7. Given a map of an estate and a set of sections along centre lines of roads, together with additional sections if necessary, so that the whole may afford sufficient information as to the levels of the ground at its various parts, how could you proceed to lay down contours on the map, and what would be some of the advantages of having the given information put into the new form of a contour map?

8. In a triangle which may be denoted as ABC, with a split line AD, the following lengths have been noted as measurements made on the ground: AB=1876, AC=1358, BC=1964, AD=1282, BD=1082. Check the measured lengths of the three sides as to whether they be accurate or not.

9. In an oblique bridge, designed according to Buck's methods, show that the coursing joint in the extrado is more nearly perpendicular to the direction of the axis of the arch than the coursing joint of the intrado; and point out the corresponding relation which subsists between the directions of the heading joint in the extrado and in the intrado; and show therefore that if the development of the intradosal face of a stone be a rectangle, the development of the extradosal face of the same stone will not be a rectanngle.

[The following questions will be treated as of special importance for Passing, but will not be taken into account for Honors.]

10. State a formula by which to compute the area of a triangle when its three sides are given.

11. Given a side and the opposite angle of a triangle, and either another side or another angle, state a process for resolving the triangle.

12. What is the line of collimation in a theodolite?

13. What is the essential condition to be brought about in the adjustment of the line of collimation in the common or Y theodolite?

14. What is the nature of a traverse survey?

15. What is the nature of a contour survey and map?

16. Describe the chief methods you know which are useful, or are commonly taught, for ranging a long offset?

Third Year Students, including Coates' Prize.

Appendix, No. 8.

General Class Examination.

Civil and Mechanical Engineering.

1. Name the five orders of Classical Architecture, and by written descriptions, aided by figured sketches, give distinctions among them, by which they might be severally recognised.

2. Name the successive styles of the Gothic Architecture of England, and give a brief description of each as to its character, and the period of its prevalence.

3. Explain the meanings of the following terms in Architecture:—Torus, Astragal, Cyma, or Cyma Recta, Ovolo, Scotia, Abacus, Modillion, Mullion, Entasis, Corbel, Crocket.

4. Show clearly why the neutral lamina of a beam supported at both ends and loaded at the middle, is subject to shearing stress, except at the middle of the length.

5. How does the stiffness of round shafts to resist elastic twisting vary with the diameter, and length? Give demonstration of your answer.

6. How does the strength of round shafts to resist set, or fracture, vary with their diameter? Give demonstration of your answer.

7. What is meant by the Modulus of Elasticity of a material?

8. For calculating the load required to produce any specified deflexion in a rectangular beam or bar, supported at both ends, and loaded at middle, the usual formulae make the required load to vary directly as the breadth, other things being equal: that is to say, that if the breadth alone be changed, the stiffness will be altered in proportion to the breadth. Show, however, that when the breadth of a bar of iron or other metal is increased, so as to be very great relatively to the depth, and so that the beam or bar assumes the character of a plate, the stiffness will be increased more than in the simple proportion in which the breadth is increased.

9. Taking the moment of inertia of an area or surface round an axis, in investigations on strength and stiffness of materials, to mean the sum obtained by multiplying each element of the area by the square of its distance from the axis, and adding the products together, find what is the moment of inertia of a rectangle round a line passing through its centre and parallel to two of its sides.

10. Also find what is the moment of inertia of a circular area round an axis passing through its centre normally to its surface, and its moment of inertia round a diameter.

11. Show that in a bar subjected to bending, the moment of the couple with which at any cross section it resists a given degree of bending within elastic limits is equal to the moment of inertia of that cross section round its neutral axis, multiplied by the longitudinal stress per unit of area at a unit of distance from the neutral axis: (the stress being understood to be the stress, or change of stress, induced by the bending, or to be the actual stress if the beam were free from stresses when not bent)

12. Answer one of the following two questions marked (*a*) and (*b*), *but not both, as credit will be allowed for only one.*

(*a*) Specify clearly what is meant by the "Modulus of Rupture," or "Coefficient of Rupture" for a material, with reference to a certain assumed or supposed stress in the extreme fibre of a rectangular beam at the time of rupture by cross bending which leads to defining the Resistance to Breaking Across, or Modulus of Rupture, as eighteen times the load which is required to cross-break a bar of the material one inch square, supported at two points one foot apart, the load being applied in the middle between the points of support.

(*b*) State the principle modes of providing the water supply, subject to pressure, for Sir William Armstrong's Hydraulic Apparatus for working cranes, hoists, dock gates, &c., at harbours, and give a brief account of the nature of this apparatus.

13. Explain some of the methods used practically for measuring the head or depth of water over the crest of a rectangular notch, or over the vertex of a V notch, for the gauging of flowing water; pointing out the relative advantages of the several methods.

14. State the general principle as to the flow of water through orifices similar to one another in form and similarly situated relatively to the still-water surface,

Appendix, No. 8.

General Class Examination.

which was demonstrated in the lectures, on the hypothesis of the water being a perfect fluid.

15. Apply this principle in demonstrating, according to the same hypothesis, the truth of the Lowell Formula for the flow through rectangular notches, without regard to the exact amount of its numerical co-efficients.

16. Describe briefly the use of the triangular or lattice-work bracing often used for the sides of large beam bridges, contrasting the conditions as to rigidity and strength afforded through its means, with the flexibility and weakness which would occur if the top and bottom booms, or flanges, or "chords," were connected at their proper distance apart simply by upright bars giving quadrilateral instead of triangular openings.

17. Explain what is meant by the contraction of the vein in water issuing from an orifice.

18. In oblique bridges, what is meant by the focus of the joints in the face of the arch, and what by its eccentricity; and how is the focus used in the drawing of oblique bridges?

NATURAL PHILOSOPHY.—*Examiner, Professor Stevelly.*

EXPERIMENTAL PHYSICS.

1. Explain what two sciences take their origin from body or matter being extended, and yet limited in the extension of individual bodies. Explain the distinctions between the extension of pure space and that of body or matter.

2. Give one or two remarkable exemplifications of the limits to which experimentalists have been permitted to trace the extremely minute state of subdivision in which matter may be found to exist.

3. Define the terms "inertia," "force," and "motion." Explain the relation existing between these, and state how each of them is reduced to numerical valuation.

4. State the triangular law of equilibrium of three forces applied simultaneously to the same point of a body, and give the experimental proof of its truth.

5. Explain what is meant by the centre of gravity of a heavy body, and how it is experimentally proved that every body has a centre of gravity.

6. Explain the mechanical principle on which the action of the wings of a bird support its weight in the air and propel it, and can only propel it forward.

7. State the hydrostatic paradox, and describe some of the experimental proofs of its truth.

8. How much of its weight does a heavy body, entirely immersed in a heavy fluid, appear to lose? State the experimental proof of what you assert.

9. Define "the density of a body," and "the specific gravity" of a body. Point out the distinction between them, and prove that the specific gravity is equal to the true weight divided by the weight it appears to lose when immersed in the fluid, whose density is taken as unit.

10. State the hydrostatic laws which govern the flotation in equilibrio of a heavy body on a heavy fluid. Distinguish the three states of equilibrium in which it may be found to float.

11. Explain why you cannot fully charge a Leyden jar while its outer coating is insulated.

12. Define an "optical medium," and a "ray" of light, and state the laws which are found to govern the reflection and ordinary refraction of a ray of light.

NATURAL HISTORY—*Examiner, Professor Wyville Thomson.*

BOTANY.

1. Describe a vegetable cell, giving in detail the structure and the chemical composition of its different parts.

2. Name the four principal divisions of dicotyledonous plants, and give diagrams illustrating the essential characters of these divisions.

3. Describe the structure of a stamen. What adhesions occur between stamens? Name the natural orders in which certain special forms of adhesion between the stamens are characteristic.

4. State all the points of distinction between a siliqua and a legume; between a siliqua and a capsule; between a drupe and a follicle; and between an achene, a caryopsis, a cypsela, and a mericarp. *Appendix, No. 8.*

5. Distinguish in detail between the natural orders Ranunculaceæ, Euphorbiaceæ, Amentiferæ, Cyperaceæ, and Coniferæ, in reference to the structure of the flower, and the insertions and relations of its various parts. General Class Examination.

6. (*Honor*). State Hoffmeister's views with reference to the reproduction of the Equisetaceæ and the Lycopodiaceæ.

CHEMISTRY.—*Examiner, Dr. Andrews.*

1. What are the methods of separating lime from magnesia?
2. What are the tests for the oxides of Mercury?
3. How would you analyse, qualitatively, an alloy of copper, nickel, and zinc?
4. Give an account of the method of determining the quantity of sugar in urine by the reduction of the oxide of copper?
5. How is the amount of urea in urine determined?
6. What are the characteristic properties of calculi formed of the following bodies, (*a*) uric acid, (*b*) urate of ammonia, (*c*) cystic oxide?
7. Describe the uranium process for determining the amount of phosphoric acid in urine.

MATRICULATION EXAMINATION—OCTOBER, 1867.

Matriculation Examination.

THE ENGLISH LANGUAGE.—*Examiner, Professor Yonge.*

1. From what languages is the English language chiefly derived?
2. In what points do an English verb and noun differ from a Latin verb and noun?
3. Name one poet, one dramatic writer, one historian, one orator, of pre-eminent reputation, who flourished before the present century, with the title and subject of one of their most important works, and a statement of the reign or reigns in which they lived.
4. What is the difference in the qualities required from the historian and a writer of plays, and, generally, from a prose writer and a poet?

SUBJECT FOR ESSAY

(*Not to exceed three pages*).

THE USEFULNESS OR MISCHIEF OF AMBITION.

MATHEMATICS.—*Examiner, Professor Purser.*

ARITHMETIC.

1. Two men start at the same time to walk to a town $10\frac{1}{2}$ miles off. One reaches it 14 minutes before the other. How would it have been if the distance had been a mile longer?
2. An estate fifty years ago let for £2 13*s.* 1*d.*, Irish money, per Irish acre; it now fetches £3 0*s.* 6*d.*, English money, per English acre. Show that the land has just doubled in value. [13 pence Irish = 12 pence English.]
3. Calculate the interest on £2.715 6*s.* 8*d.* for $7\frac{1}{2}$ months, at $4\frac{3}{4}$ per cent.
4. Reduce to their simplest forms

$$\frac{\frac{1}{2}+\frac{1}{3}+\frac{1}{4}+\frac{1}{5}}{\frac{1}{3}+\frac{1}{4}+\frac{1}{5}+\frac{1}{6}}, \qquad \frac{\frac{1}{5}-\frac{1}{7}+\frac{1}{7}-\frac{1}{9}}{\frac{1}{5}-\frac{1}{7}+\frac{1}{7}-\frac{1}{9}}.$$

Appendix, No. 8.

Matriculation Examination.

5. Express the following fractions as decimals to two places:—

$$\frac{11}{13}, \quad \sqrt{\frac{5}{7}}$$

EUCLID.

1. Draw a straight line perpendicular to a given straight line of unlimited length from any point without it.

2. If from the extremities of the base of a triangle two straight lines be drawn to any point within the triangle, these lines are together less than the sum of the other two sides of the triangle, but contain a greater angle.

3. Describe a square equal to a given rectilineal figure.

ALGEBRA.

1. By what expression should $xy+yz+xz$ be multiplied that the product may be $(x+y)(y+z)(z+x)+xyz$.

2. Simplify the expression—

$$\frac{2a+3x}{2a-3x}+\frac{2a-3x}{2a+3x}$$

3. Solve the equations

(1) $\frac{x}{3}+\frac{x}{5}=2+\frac{x}{2}$

(2) $(x-3)(x-5)=(x+2)(x+7)$

(3) $\sqrt{x-7}+\sqrt{x}=7$

PEEL PRIZES IN GEOMETRY.—*Examiner, Professor Purser.*

1. Similar triangles are to one another in the duplicate ratio of their homologous sides.

2. The perpendiculars let fall from the vertices of a triangle upon the opposite sides meet in a point.

3. If a circle touch two given circles, the right line joining the points of contact passes through one of their centres of similitude.

4. Given base of a triangle and the radius of the circumscribing circle, find the locus of the centre of the inscribed circle.

5. If through the vertex of a triangle two lines be drawn making equal angles with the sides respectively, one to meet the base, the other to meet the circumference of the circumscribing circle, the rectangle under these lines is equal to the rectangle under the sides. Prove this, and hence solve the problem to draw through a given point a line cutting off from two intersecting lines a triangle of given area.

6. Perpendiculars are let fall on the sides of a given parallelogram from any point within it: prove that the quadrilateral formed by joining their feet has a constant area.

7. Describe a circle which shall bisect the circumferences of three given circles.

8. The circles circumscribing the three triangles formed by four intersecting lines pass through a common point.

9. A circle A is inscribed in an isosceles triangle, another circle B is described touching the sides of the extremities of the base; prove that the tangents to A at the points of intersection of the circles meet on B.

10. Two opposite vertices of a given square move upon two fixed right lines at right angles. Shew that the remaining vertices will move upon another pair of fixed right lines.

Scholarship Examinations.—October, 1867.

Literary Scholarships.—First Year Students.

Greek.—*Examiner, Professor MacDouall.*

I.—Translate the following unprepared passage:—

γραμματικῆς μὲν οὐδενὸς ἧττον ἐπεμελήθη καὶ δι' αὐτῆς ποιητικῆς πάσης· αὐτός τε τραγῳδίας ἐποίει καὶ κωμῳδίας εὐδοκίμους· ἔτι δὲ μᾶλλον ὕστερον αὐξηθείς, ὥστε καὶ τὴν δύναμιν συναυξῆσαι, ῥητορικῆς τε καὶ μουσικῆς καὶ τῆς περὶ τὰ μαθήματα θεωρίας καὶ φιλοσοφίας ἁπάσης ἐπεμελεῖτο. χάριν δὲ εἰδέναι πᾶσιν ἔλεγεν ἀεὶ τοῖς μαθήμασι, πολὺ μὲν ἔχουσι τὸ ἐλευθέριον, πολὺ δὲ τὸ χρήσιμον εἰς τὸν βίον, πάντων δὲ μάλιστα τὸ εὐδιάγωγον πρός τε νεότητα καὶ γῆρας· ἔλεγε δὲ καὶ τὰς Μούσας ἅρα διὰ τοῦτο πολλὰς ὑπὸ τῶν θεολόγων παραδεδόσθαι, ὅτι πολὺ τὸ ποικίλον ἔχει τὰ παιδεύματα καὶ πρὸς πᾶσαν βίου χρῆσιν οἰκεῖον. καὶ οὔτε τὴν ἐμπειρίαν αὐτῶν οὔτε τὴν ἀπόλειψιν ὁμοίαν ὑπελάμβανεν εἶναι τῇ τῶν βαναύσων τεχνῶν, ἀλλὰ τοὐναντίον ἐπονειδιστον τοῖς μετρίως ζῶσι τήν τε τούτων ἄγνοιαν καὶ τὴν τῶν βαναύσων ἐπιστήμην. οὕτω μὲν οὖν οὐκ ἔστιν ὅτῳ τῶν παιδευμάτων πρὸς ἀργυρισμὸν ἐχρήσατο οὐδὲ ἐκαπήλευσεν.

II.—Translate into Attic the following sentences:—

1. They sent word to us that, unless we compeared, to join them in the expedition, they would march against us. 2. He advised us to be on our guard against stimulants to eat when not hungry and to drink when not thirsty. 3. He constantly sent out bodies of cavalry, that the enemy's advanced guards might not fall upon the fields near the city and lay them waste. 4. The defendant seized and carried him off not in the house but in the street, when he might easily both have saved him and executed what had been decreed by the assembly. 5. When he perceived, that they not only were not setting free the states but were not even disbanding their army, he led his own force into Boeotia. 6. They do not wish to be concealed, and are even ashamed if not reputed to be wicked. 7. Who would have chosen to disobey, when he saw the king obeying? 8. You must so manage that every man may feel that he has been a principal cause of the victory. 9. Do you think that we shall still overtake them before they are in their fastnesses? for we look upon it as a great calamity that they ran away from us unobserved. 10. If death were an escape from everything it would be a god-send to the wicked to be delivered by dying from this body and their wickedness at the same time as from their vitality.

Translate the following lines from the *Medeia* of Euripides:—

πολλάκις ἤδη διὰ λεπτοτέρων
μύθων ἔμολον καὶ πρὸς ἀμίλλας
ἦλθον μείζους ἢ χρὴ γενεὰν
θῆλυν ἐρευνᾶν· ἀλλὰ γὰρ ἔστιν
μοῦσα καὶ ἡμῖν, ἢ προσομιλεῖ
σοφίας ἕνεκεν, πάσαισι μὲν οὔ,
παῦρον δ' ἂν ἴσως
εὕροις γένος οὐκ ἀπόμουσον.
καί φημι βροτῶν οἵτινές εἰσιν
πάμπαν ἄπειροι μηδ' ἐφύτευσαν
παῖδας, προφέρειν εἰς εὐτυχίαν
τῶν γειναμένων. οἱ γὰρ ἄτεκνοι,
δι' ἀπειροσύνην εἴθ' ἡδὺ βροτοῖς
παῖδες τελέθουσ' εἴτ' ἀνιαρόν,
πολλῶν μόχθων ἀπέχονται.
οἷσι δὲ τέκνων ἔστιν ἐν οἴκοις
γλυκερὸν βλάστημ', ἐσορῶ μελέτῃ
κατατρυχομένους τὸν ἅπαντα χρόνον,
πρῶτον μὲν ὅπως θρέψουσι καλῶς
βιότου θ' ὑπόθεν λείψουσι τέκνοις·

Appendix, No. 8.

Scholarship Examinations.

ἔτι δ' ἐκ τούτων, εἴτ' ἐπὶ φλαύροις
εἴτ' ἐπὶ χρηστοῖς
μοχθοῦσι, τόδ' ἐστὶν ἄδηλον.
ἓν δὲ τὸ πάντων λοίσθιον ἤδη
πᾶσιν κατερῶ θνητοῖσι κακόν.
καὶ δὴ γὰρ ἅλις βίοτόν θ' εὗρον,
σώματά θ' ἥβην εἰσῆλθε τέκνων
χρηστοί τ' ἐγένοντ'· εἰ δὲ κυρήσαι
δαίμων, εὐθὺς φροῦδος θάνατος
προφερων καὶ ἅπαντας ἐς Ἄιδην.
πῶς οὖν λύει πρὸς ταῖς ἄλλαις
τήνδ' ἔτι λύπην ἀνιαροτάτην
παίδων ἕνεκεν
θνητοῖσι θεοὺς ἐπιβάλλειν.

Brief notes may be annexed touching points of language or metre or interpretation.

LATIN.—*Examiner, Professor William Nesbitt,* M.A.

Translate:—

1. Ager Tarquiniorum, qui inter urbem ac Tiberim fuit, consecratus Marti Martius deinde campus fuit. forte ibi tum seges farris dicitur fuisse, matura messi. quem campi fructum quia religiosum erat consumere, desectam cum stramento segetem magna vis hominum simil immissa corbibus fudere in Tiberim tenui fluentem aqua, ut mediis caloribus solet. ita in vadis haesitantis frumenti acervos sedisse illitos limo. insulam inde paulatim et aliis, quae fert temere flumen, eodem invectis factam. postea credo additas moles manuque adiutum, ut tam eminens area firmaque templis quoque ac porticibus sustinendis esset. direptis bonis regum damnati proditores sumptumque supplicium, conspectius eo, quod poenae capiendae ministerium patri de liberis consulatus imposuit, et qui spectator erat amovendus, eum ipsum fortuna exactorem supplicii dedit. stabant deligati ad palum nobilissimi iuvenes. sed a ceteris, velut ab ignotis capitibus, consulis liberi omnium in se averterant oculos, miserebatque non poenae magis homines quam sceleris, quo poenam meriti essent: illos eo potissimum anno patriam liberatam, patrem liberatorem, consulatum ortum ex domo Iunia, patres, plebem, quidquid deorum hominumque Romanorum esset, induxisse in animum ut superbo quondam regi tum infesto exsuli proderent. consules in sedem processere suam, missique lictores ad sumendum supplicium. nudatos virgis caedunt securique feriunt, cum inter omne tempus pater vultusque et os ejus spectaculo esset eminente animo patrio inter publicae poenae ministerium. secundum poenam nocentium, ut in utramque partem arcendis sceleribus exemplum nobile esset, praemium indici pecunia ex aerario libertas et civitas data. ille primum dicitur vindicta liberatus. quidam vindictae quoque nomen tractum ab illo putant: Vindicio ipsi nomen fuisse. post illum observatum, ut qui ita liberati essent, in civitatem accepti viderentur.

(*a*) Explain the constructions, *manu adjutum ; porticibus sustinendis ; Vindicio ipsi nomen esse.* (*b*) What were the other modes of manumission?

2. Quid? si illud etiam addimus, quod recte addi potest, nihil esse quod ad se rem ullam tam adliciat et tam attrahat quam ad amicitiam similitudo, concedetur profecto verum esse, ut bonus boni diligant asciscantque sibi quasi propinquitate coniunctos atque natura. Nihil est enim appetentius similium sui nec rapacius quam natura. Quam ob rem hoc quidem, Fanni et Scaevola, constat, ut opinor, bonis inter bonos quasi necessariam benevolentiam, qui est amicitiae fons a natura constitutus. Sed eadem bonitas etiam ad multitudinem pertinet. Non enim est inhumana virtus neque immunis neque superba, quae etiam populos universos tueri eisque optime consulere soleat, quod non faceret profecto, si a caritate vulgi abhorreret.

3. Lysandrum Lacedaemonium, cuius modo feci mentionem, dicere aiunt solitum Lacedaemonem esse honestissimum domicilum senectutis: nusquam enim tantum tribuitur aetati, nusquam est senectus honoratior. Quin etiam memoriae proditum est, quum Athenis ludis quidam in theatrum grandis natu venisset, magno consessu locum nusquam ei datum a suis civibus, quum autem ad Lace-

daemonios accessisset, qui, legati quum essent, certo in loco consederant, consurrexisse omnes illi dicuntur et senem sessum recepisse. Quibus quum a cuncto consessu plausus esset multiplex datus, dixisse ex iis quemdam 'Atheniensis scire quae recta essent, sed facere nolle.'

Appendix, No. 8.

Scholarship Examinations.

GRAMMAR AND HISTORY.

1. From what part of the simple Latin verb are frequentative verbs formed, and how many terminations of these verbs are there? Give also the terminations of desideratives and inceptives. To what class of verbs do you assign those ending in *illo*—as *sorbillo*?

2. Explain the meaning and formation of the words *quin*, *quippe*, *adeo*, *actutum*, *dum*, *donec*, *palam*, *clam*, *procul*, *simul*.

3. Explain the constructions:

(*a*) *Macte virtute esto.*
(*b*) *Decemviri legibus scribundis.*
(*c*) *Maximam partem lacte vivunt.*
(*d*) *Cæsar dicere solebat non tam sua quam respublicæ interesse ut salvus esset.*

4. When was the office of censor instituted at Rome, and with what immediate object? State accurately the duties of the censors during the most flourishing period of the Republic? When did the office lose its importance?

5. What events in Roman history are connected with the names, Allia, Vesuvius, Caudium, Lentinum, Cysoncephalæ? Give dates in each case.

Translate:—

1. O felix una ante alias Priameïa virgo,
Hostilem ad tumulum Troiae sub moenibus altis
Iussa mori, quae sortitus non pertulit ullos,
Nec victoris heri tetigit captiva cubile!
Nos patria incensa, diversa per aequora vectae,
Stirpis Achilleae fastus iuvenemque superbum,
Servitio enixae, tulimus. Qui deinde, secutus
Ledaeam Hermionem Lacedæmoniosque hymenaeos,
Me famulo famulamque Heleno transmisit habendam.
Ast illum, ereptae magno inflammatus amore
Coniugis et scelerum Furiis agitatus, Orestes
Excipit incautum, patriasque obtruncat ad aras.
Morte Neoptolemi regnorum reddita cessit
Pars Heleno, qui Chaonios cognomine campos,
Chaoniamque omnem Troiano a Chaone dixit,
Pergamaque Iliacamque iugis hanc addidit arcem.
Sed tibi qui cursum venti, quae fata dedere,
Aut quisnam ignarum nostris deus appulit oris?
Quid puer Ascanius? Superatne? et vescitur aura,
Quae tibi iam Troia..... ?
Ecqua tamen puero est amissae cura parentis?
Ecquid in antiquam virtutem animosque viriles
Et pater Aeneas et avunculus excitat Hector?

(*a*) Who is the daughter of Priam referred to in the first verse?

(*b*) Distinguish between the meanings of the forms of expression, *quæ pertulit* and *quæ pertulerit*.

(*c*) Explain the use of *que* in *formulamque*, etc.

(*d*) State accurately the significance of the interrogative pronouns in the phrases—*Qui venti; quisnam deus; ecqua cura; ecquid in antiquam*, etc.

(*e*) Give the various meanings of *superat* used intransitively.

Appendix, No. 8.

Scholarship Examinations.

2. Ergo ubi me in montes et in arcem ex urbe removi,
Quid prius illustrem satiris Musaque pedestri?
Nec mala me ambitio perdit nec plumbeus Auster
Auctumusque gravis, Libitinae quaestus acerbae.
Matutine pater, seu Iane libentius audis,
Unde homines operum primos vitaeque labores
Instituunt - sic dis placitum -, tu carminis esto
Principium. Romae sponsorem me rapis. "Eia,
"Ne prior officio quisquam respondeat, urge!"
Sive Aquilo radit terras seu bruma nivalem
Interiore diem gyro trahit, ire necesse est.
Postmodo, quod mi obsit, clare certumque locuto
Luctandum in turba et facienda iniuria tardis.
"Quid vis, insane, et quas res agis?" improbus urget
Iratis precibus: "tu pulses omne quod obstat,
"Ad Maecenatem memori si mente recurras."
Hoc iuvat et melli est, non mentiar. At simul atras
Ventum est Esquilias, aliena negotia centum
Per caput et circa saliunt latus. "Ante secundam
"Roscius orabat sibi adesses ad Puteal cras."
"De re communi scribae magna atque nova te
"Orabant hodie meminesses, Quinte, reverti."—
"Imprimat his, cura, Maecenas signa, tabellis!"
Dixeris "Experiar:"—Si vis, potes," addit et instat.

(*a*) Illustrate from Horace the expression, *Musa pedestri.*
(*b*) What is the allusion in *Libitinæ quæstus acerbæ?*
(*c*) Explain the constructions, *improbus urget; hoc melli est.*
(*d*) Write brief notes on *ad Puteal* and *de re communi.*

Translate into Latin prose:—

Then the son of the Dictator advances from his post to his father: "Without your orders, General," says he, "I would never fight out of my rank; no, not even were I to see victory certain. If you permit, I wish to show to yonder monster, since he so fiercely heaps taunts on the Roman youths, that I am sprung from that family which hurled the Gauls down from the Tarpeian rock." Then the Dictator says: "Prosper, my son, in virtue, and in piety towards thy father and country. Go on, and by the help of the gods render the Roman name invincible." Thereupon his companions arm the young man. He takes the shield of a foot-soldier, he is girt with a Spanish sword, handy for close fighting. They lead him forward, armed and equipped, against the Gaul who was stupidly exulting, and (since this too has seemed to them of old time worthy of remembrance) even putting out his tongue in derision.

HISTORY AND THE ENGLISH LANGUAGE.—*Examiner Professor Yonge.*

HISTORY.

1. Between the conquest and the death of Henry VII. what kings were succeeded by their sons, and in what instances did the succession pass to one who was not a son?

2. What were the chief causes which induced Simon de Montfort to rise against Henry III.; and what great constitutional benefit does England derive from his rebellion?

3. What kings after Edward I. waged war with Scotland? What were the chief events in any such wars?

4. Who were the combatants in the battles of Lewes, Neville's Cross, Otterbourne, Shrewsbury, Wakefield, Barnet, Sluys, Falkirk, Dover, and Verneuil?

5. Who was the Earl of Warwick in the reign of Henry VI., and who in the reign of Henry VII.?

Appendix, No. 8.

Scholarship Examinations.

6. In French History what were the States General? What the Parliament?

7. Who were Blanche of Castile, Joinville, Etienne Marcel, Du Guesclin?

8. In what instances did either French or English kings take a personal share in the Crusades?

9. In what particulars did the Crusades produce important changes in the manners or feelings of the time, and exercise a permanent influence on the subsequent history of Christendom?

10. What great acquisitions were made by the French crown from 1450–1509?

SUBJECT FOR ESSAY

(*Not to exceed three pages*).

THE ADVANTAGES OF THE STUDY OF HISTORY.

SECOND YEAR STUDENTS.

GREEK.—*Examiner, Professor Mac Douall.*

I.—Translate the following passage from the *Symposion* of PLATON:—

Ἔφη οἱ[1] Σωκράτη ἐντυχεῖν λελουμένον τε καὶ τὰς βλαύτας ὑποδεδεμένον,—ἃ[2] ἐκεῖνος ὀλιγάκις ἐποίει,—καὶ ἐρέσθαι αὐτόν, ὅποι[3] ἴοι[3] οὕτω καλὸς γεγενημένος. καὶ τὸν[4] εἰπεῖν, ὅτι[5] "ἐπὶ δεῖπνον εἰς[6] Ἀγάθωνος.[6] χθὲς γάρ αὐτὸν διέφυγον τοῖς ἐπινικίοις[a] φοβηθεὶς τὸν ὄχλον, ὡμολόγησα δ' εἰς τήμερον[b] παρέσεσθαι. ταῦτα[7] δὴ ἐκαλλωπισάμην,[c] ἵνα[8] καλὸς παρὰ κολὸν ἴω."[8] "ἀλλὰ σύ," ἦ[9] δ'[9] ὅς,[9] "πῶς ἔχεις πρὸς τὸ ἅμα ἰέναι ἄκλητος[10] ἐπὶ δεῖπνον;" καὶ ἔφη εἰπεῖν, ὅτι[5] "οὕτως, ὅπως[11] ἂν[11] σὺ κελεύῃς."[11] "ἔπου τοίνυν," ἔφη, "ἵνα καὶ τὴν παροιμίαν[d] διαφθείρωμεν μεταβάλλοντες, ὡς ἄρα καὶ ἀγαθῶν ἐπὶ δαῖτας ἴασιν αὐτόματοι[e] ἀγαθοί.* "Ομηρος μὲν γὰρ κινδυνεύει οὐ μόνον διαφθεῖραι ἀλλὰ καὶ ὑβρίσαι εἰς ταύτην τὴν παροιμίαν. ποιήσας γὰρ τὸν Ἀγαμέμνονα διαφερόντως ἀγαθὸν ἄνδρα τὰ πολεμικὰ τὸν δὲ Μενέλεων μαλθακὸν αἰχμητήν, θυσίαν ποιουμένου καὶ ἑστιῶντος[f] τοῦ Ἀγαμέμνονος, ἄκλητον[g] ἐποίησεν ἐλθόντα τὸν Μενέλεων† ἐπὶ τὴν θοίνην,[h] χείρω[i] ὄντα ἐπὶ τὴν τοῦ ἀμείνονος." ταῦτ' ἀκούσας[12] εἰπεῖν[12] ἔφη· "ἴσως μέντοι κινδυνεύσω κἀγὼ—οὐχ ὡς σὺ λέγεις, ὦ Σώκρατες, ἀλλὰ καθ' Ὅμηρον—φαῦλος[h] ὢν ἐπὶ σοφοῦ ἀνδρὸς ἰέναι θοίνην ἄκλητος. ὅρα[13] οὖν ἄγων με τί[13] ἀπολογήσει.[13] ὡς ἐγὼ μὲν οὐχ ὁμολογήσω ἄκλητος[14] ἥκειν,[14] ἀλλ' ὑπὸ σοῦ κεκλημένος." "σύν τε δύ'," ἔφη, "ἐρχομένω πρὸ ὃ τοῦ βουλευσόμεθ'‡ ὅ τι ἐροῦμεν. ἀλλ' ἴωμεν." τοιαῦτ' ἄττα σφᾶς[16] ἔφη διαλεχθέντας ἰέναι.[16] τὸν οὖν Σωκράτη ἑαυτῷ πως προσέχοντα τὸν νοῦν κατὰ τὴν ὁδὸν πορεύεσθαι ὑπολειπόμενον καὶ—περιμένοντος οὖ[17]—κελεύειν προϊέναι εἰς τὸ πρόσθεν. ἐπειδὴ δ' ἦ[18] γενέσθαι[18] ἐπὶ τῇ οἰκίᾳ τῇ Ἀγάθωνος, ἀνεῳγμένην[i] καταλαμβάνειν τὴν θύραν, καὶ εὐθὺς παῖδά τιν' ἔνδοθεν ἀπαντήσαντ' ἄγειν οὗ κατέκειντο οἱ ἄλλοι.

II.—*a–l.* Derive or decompound every word to which one of these letters is attached.

1–18. Explain distinctly the construction of every word or phrase to which one of these figures is attached.

* Translate the byword here said to be perverted, viz., *αὐτόματοι δ' ἀγαθοὶ δειλῶν ἐπὶ δαῖτας ἴασιν.*

† Can you refer to the passage in Book II. of the *Ilias* which is here alluded to?

‡ How do you construe and explain the saw, in the Xth Book of the *Ilias*, which is here alluded to?

σύν τε δύ' ἐρχομένω καί τι πρὸ ὃ τοῦ ἐνόησεν
ὅππως κέρδος ἔῃ· μοῦνος δ' εἴπερ τι νοήσῃ,
τῷ βράσσων[k] μὲν ἔνεστι νόος λεπτὴ δέ τε μῆτις.

Appendix, No. 8.

Scholarship Examinations.

I.—Translate the following strophes from the *Troades* of EURIPIDES:—

ΚΑΣΑΝΔΡΑ.

ἄνεχε πάρεχε φῶς! φέρε σέλας! στρ.
ἰοὺ ἰού!
λαμπάσι τόδ' ἱερὸν
ὑπὲρ Ὑμεναιον φλέγω.
μακάριος ὁ γαμέτας,
μακαρία δ' ἐγὼ βασιλικοῖς λέκτροις
κατ' Ἄργος ἁ γαμουμένα.
Ὑμήν, ὦ Ὑμέναι' ἄναξ!
ἐπεὶ σὺ, μᾶτερ! ἐπὶ δάκρυσι καὶ
γόοις πόσιν θανόντα πατρίδα τε
φίλαν καταστένουσ' ἔχεις,
ἐγὼ τόδ', Ὑμέναιε! σοὶ
ἀναφλέγω πυρὸς φῶς ἐς αὐγάν,
ἐς αἴγλαν ἐπ' ἐμοῖς γάμοις.
δίδου δ', ὦ Ἑκάβας σέβας!
παρθένων ἐπὶ λέκτροις ἃ νόμος ἔχει.
πάλλε πόδ', ἱερὸν ἄναγε χορόν!— ἀντ.
εὐὰν εὐοῖ!—
ὡς ἐπὶ πατρὸς ἐμοῦ
μακαριωτάταις τύχαις.
ὁ χορὸς ὅσιος ἐμοί·
ἄγε σύ, Φοῖβέ! νιν κατὰ σὸν ἐν δάφναις
ἀνάκτορον θυηπόλῳ.
Ὑμήν, ὦ Ὑμέναι' Ὑμήν!
χόρευε, μᾶτερ! ἄναγε, πόδα σὸν
ἔλισσε τᾷδ' ἐκεῖσε, μετ' ἐμέθεν
φέρουσα φιλτάταν βάσιν
βόα τε τὸν Ὑμέναιον ἐν
μακαρίαις ἀοιδῶν ἰακχαῖς.
ἴτ' ὦ καλλίπεπλοι Φρυγῶν
κόραι! μέλπετέ μοι γάμον
καὶ πεπρωμένον εὐνᾷ πόσινέ μέθεν.

II.—Subjoin brief notes, explanatory, illustrative, and critical; translating also and commenting upon such lections, differing from those given above, as you may remember.

LATIN.—*Examiner, Professor William Nesbitt,* M.A.

Translate:—

1. Ceterum praè strepitu ac tumultu nec consilium nec imperium accipi poterat, tantumque aberat ut sua signa atque ordines miles et locum nosceret, ut vix ad arma capienda aptandaque pugnae competeret animus, opprimerenturque quidam onerati magis his quam tecti. et eret in tanta calligine maior usus auriu m quam oculorum. ad gemitus vulnerum ictusque corporum aut armorum et mixtos strepentium paventiumque clamores circumferebant ora oculosque. alii fugientes pugnantium globo illati haerebant, alios redeuntes in pugnam avertebat fugientium agmen, deinde, ubi in omnis partis nequiquam impetus capti, et ab lateribus montes ac lacus, a fronte et ab tergo hostium acies claudebat, apparuitque nullam nisi in dextera ferroque salutis spem esse, tum sibi quisque dux adhortatorque factus ad rem gerendam, et nova de integro exorta pugna est, non illa ordinata per principes hastatosque ac triarios, nec ut pro signis antesignani, post signa alia pugnaret acies, nec ut in sua legione miles aut cohorte aut manipulo esset: fors conglobat et animus suus cuique ante aut post pugnandi ordinem dabat; tantusque fuit ardor animorum, adeo in tentus pugnae animus, ut eum motum terrae, qui multarum urbium Italiae magnas partes prostravit avertitque cursu rapidos amnis, mare fluminibus invexit, montes lapsu ingenti proruit, nemo pugnantium senserit.

(*a*) Distinguish *signa*, *ordinem*, and *locum*.

(*b*) Describe briefly the changes in the organization of the legion which took

place at different epochs under the Republic, and point out anything peculiar which you observe in the use of the technical terms in this passage. *Appendix, No. 8.*

2. Ego vero propter sermonis delectationem tempestivis quoque conviviis delector nec cum aequalibus solum, qui pauci admodum restant, sed cum vestra etiam aetate atque vobiscum, habeoque senectuti magnam gratiam, quae mihi sermonis aviditatem auxit, potionis et cibi sustulit. Quod si quem etiam ista delectant, ne omnino bellum indixisse videar voluptati, cuius est fortasse quidam naturalis modus, non intelligo ne in istis quidem ipsis voluptatibus carere sensu senectutem. Me vero et magisteria delectant a maioribus instituta et is sermo, qui more maiorum a summo adhibetur in poculis, et pocula, sicut in symposio Xenophontis est, minuta atque rorantia et refrigeratio aestate et vicissem aut sol aut ignis hibernus. Quae quidem etiam in Sabinis persequi soleo conviviumque vicinorum cotidie compleo, quod ad multam noctem quam maxime possumus vario sermone producimus. At non est voluptatum tanta quasi titillatio in senibus. Credo, sed ne desideratio quidem. Nihil autem est molestum quod non desideres. Scholarship Examinations.

(*a*) What do you understand by *magisteria*? Point out the force of the subjunctive *desideres* in the last sentence.

HISTORY.

1. To what part of the Peninsula was the name Italia originally confined, and how was it subsequently extended at successive periods? What districts were meant by the terms *Latium vetus* or *antiquum*, and *Latium novum* or *adjectum*.

2. In what year, and for what purpose, were the two cities Placentia and Cremona settled?

3. Write a brief description of the battle of the Trasimene Lake, or Cannæ, or Zama.

Translate into Latin prose:—

Even at this early age the Greeks had made considerable advances in civilization. They were collected in fortified towns, which were surrounded by walls and adorned with palaces and temples. The massive ruins of Mycenæ, and the sculptured lions on the gate of this city belong to the heroic age, and still excite the wonder of the beholder. Commerce, however, was little cultivated, and was not much esteemed: it was deemed more honourable for a man to enrich himself by robbery and piracy than by the arts of peace. Coined money is not mentioned in the poems of Homer. Whether the Greeks were acquainted, at this early period, with the art of writing, is a question which has given rise to much dispute and must remain undetermined; but poetry was cultivated with success, though yet confined to epic strains, or the narration of the exploits and adventures of the heroic chiefs.

Translate:

1. Ferme in diebus paucis, quibus haec acta sunt,
Chrysis uicina haec moritur. So. O factum bene:
Beasti: ei metui a Chryside. Sr. Ibi tum filius
Cum illis, qui amarant Chrysidem, una aderat frequens:
Curabat una funus: tristis interim,
Non numquam conlacrumabat. placuit tum id mihi.
Sic cogitabam "hic paruae consuetudinis
Causa huius mortem tam fert familiariter:
Quid si ipse amasset? quid hic mihi faciet patri?"
Haec ego putabam esse omnia humani ingeni
Mansuetique animi officia. quid multis moror?
Egomet quoque eius causa in funus prodeo,
Nil etiam suspicans mali. So. Hem quid est? Sr. Scies.
Ecfertur. imus. interea inter mulieres,
Quae ibi aderant, forte unam aspicio adulescentulam,

Appendix, No. 8.

Scholarship Examinations.

Forma. So. Bona fortasse. Sr. et uoltu, Sosia,
Adeo modesto, adeo uenusto, ut nil supra.
Quae quom mihi lamentari praeter ceteras
Visast, et quia erat forma praeter ceteras
Honesta ac liberali, accedo ad pedissequas.
Quae sit rogo. sororem esse aiunt Chrysidis.
Percussit ilico animum. attat hoc illud est,
Hinc illae lacrumae, haec illast misericordia.

What inference may be drawn from the Latin comic metres as to the ordinary pronunciation of the Latin spoken language? Quote instances from Terence to prove your answer. Give the date of Terence, and a sketch of any of his plots you may remember.

2. At quondam, dum longa gerunt pugnacibus armis
Bella, Parentales deseruere dies.
Non impune fuit: nam dicitur omine ab isto
Roma surbubanis incaluisse rogis.
Vix equidem credo: bustis exisse feruntur,
Et tacitæ questi tempore noctis avi.
Perque vias Urbis, Latiosque ululasse per agros
Deformes animas, vulgus inane, ferunt.
Post ea præteriti tumulis redduntur honores:
Prodigiisque venit funeribusque modus.
Dum tamen hæc fiunt, viduæ cessate puellæ:
Expectet puros pinea tæda dies.
Nec tibi, quæ cupidæ matura videbere matri,
Comat virgineas hasta recurva comas.
Conde tuas, Hymenæe, faces, et ab ignibus atris
Aufer: habent alias mœsta sepulcra faces.
Di quoque templorum foribus celentur opertis:
Thure vacent aræ, stentque sine igne foci.
Nunc animæ tenues, et corpora functa sepulcris
Errant: nunc posito pascitur umbra cibo.
Nec tamen hæc ultra, quam tot de mense supersint
Luciferi, quot habent carmina nostra dies.
Hanc, quia justa ferunt, dixere Feralia lucem.
Ultima placandis Manibus illa dies.

(*a*) What various readings have been proposed for the senseless *dies* in the third line from the end.
(*b*) Explain the phrase *parentales dies*.
(*c*) Show, by citations, that the quantity of the *e* in *Feralia* is unusual.

3. Tum porro puer, ut saevis proiectus ab undis
Navita, nudus humi iacet, infans, indigus omni
Vitali auxilio, cum primum in luminis oras
Nixibus ex alvo matris natura profudit,
Vagituque locum lugubri complet, ut aequumst
Cui tantum in vita restet transire malorum.
At variae crescunt pecudes armenta feraeque,
Nec crepitacillis opus est, nec cuiquam adhibendast
Almae nutricis blanda atque infracta loquella,
Nec varias quaerunt vestes pro tempore caeli,
Denique non armis opus est, non moenibus altis,
Qui sua tutentur, quando omnibus omnia large
Tellus ipsa parit naturaque daedala rerum.

Translate into appropriate Latin verse:—

Gather ye rose-buds while ye may,
Old Time is still a-flying;
And this same flower that smiles to-day,
To-morrow will be dying.

The glorious Lamp of Heaven, the Sun,
The higher he's a-getting
The sooner will his race be run,
And nearer he's to setting.

That age is best which is the first
When youth and blood are warmer;
But being spent, the worse, and worst
Times, still succeed the former.

HISTORY AND ENGLISH LITERATURE.—*Examiner, Professor Yonge.*

1. What do you consider the golden age of English literature? Mention the writers on whose reputation you found your opinion, with a description of one of their principal works.
2. What are the chief difficulties in the English language as it presents itself to a foreigner seeking to learn it?
3. What idea can the translation of a poem from one language into another give of the original? Does your answer apply equally to all kinds of poetry, or to which kind most? Name some of the chief translations of poems in foreign languages, ancient or modern, into English.
4. Give a sketch of either one of Shakespeare's Plays, or Paradise Lost, or Absalom and Achitophel, or the Rape of the Lock, or of one of Scott's principal poems, or of Childe Harold.
5. What are the principal sources from which the English language is principally derived: and in what respect does it most differ from the classical languages?
6. What great English poets have also been eminent as writers of prose?

MODERN LANGUAGES.—*Examiner, Professor Meissner.*

FRENCH.

I.—Translate into French:

It is difficult to conceive a duller place than Saint Germans was when James II. held his Court there; and yet there was scarcely in all Europe a residence more enviably situated than that which the generous Lewis had assigned to his suppliants. The woods were magnificent, the air clear and salubrious, the prospects extensive and cheerful. No charm of rural life was wanting; and the towers of the greatest city of the Continent were visible in the distance. The royal apartments were richly adorned with tapestry and marquetry, vases of silver and mirrors in gilded frames. A pension of more than forty thousand pounds sterling was annually paid to James from the French Treasury. He had a guard of honour composed of some of the finest soldiers in Europe. But over the domain and mansion brooded a constant gloom.—MACAULAY.

II.—Translate into English:—

BERALDE.

Rien. Il ne faut que demeurer en repos. La nature d'elle-même, quand nous la laissons faire, se tire doucement du désordre où elle est tombée. C'est notre inquiétude c'est notre impatience qui gâte tout; et presque tous les hommes meurent de leurs remèdes, et non pas de leurs maladies.

ARGAN.

Mais il faut demeurer d'accord, mon frère, qu'on peut aider cette nature par de certaines choses.

Appendix, No. 8.

Scholarship Examinations.

BERALDE.

Mon Dieu! mon frère, ce sont pures idées dont nous aimons à nous repaître; et, de tout temps, il s'est glissé parmi les hommes de belles imaginations que nous venons à croire parce qu'elles nous flattent, et qu'il serait à souhaiter qu'elles fussent véritables. Lorsqu'un médecin vous parle d'aider, de secourir, de soulager la nature, de lui ôter ce qui lui nuit et lui donner ce qui lui manque, de la rétablir, et de la remettre dans une pleine facilité de ses fonctions; lorsqu'il vous parle de rectifier le sang, de tempérer les entrailles et le cerveau, de dégonfler la rate, de raccommoder la poitrine, de réparer le foie, de fortifier le cœur, de rétablir et conserver la chaleur naturelle, et d'avoir des secrets pour étendre la vie à de longues années, il vous dit justement le roman de la médecine. Mais, quand vous en venez à la vérité et à l'experience, vous ne trouvez rien de tout cela; et il en est comme de ces beaux songes, qui ne vous laissent au réveil que le déplaisir de les avoir crus.—MOLIERE.

III.—Heureux qui de l'oubli ne fuit point les ténébres!
Heureux qui ne sait pas combien d'échos funébres
Le bruit d'un nom fait retentir!
Et si la gloire est inquiète,
Et si la palme du poëte
Est une palme de martyr!

Sans craindre le chasseur, l'orage ou le vertige,
Heureux l'oiseau qui plane et l'oiseau qui voltige!
Heureux qui ne veut rien tenter!
Heureux qui suit ce qu'il doit suivre!
Heureux qui ne vit que pour vivre,
Qui ne chante que pour chanter!

V. HUGO.

IV.—Give a short account, in French, of Fénélon.

GERMAN.

Translate into German:—

I.—It was a glorious hot summer day, hotter than we often have in England; and the chimes of Cambridge (U.S.) rang out merrily, and the little town was full of ladies with the brightest of bonnets and the prettiest of faces. It was the last day of the Academic course, on which the fourth-year students gave a sort of farewell festival to the rest of the College and to their friends. By the kindness of one of my friends—Professor Lowell—I was invited to be present at the ceremony. On the twentieth of June we strolled across the College grounds to the house of the President, where the Professors and Students were assembled. It so happened that on that morning the news had reached America of the death of Mr. Clough; and it was pleasant to me, as it would have been to any Englishman, to see how kindly and how highly his memory was cherished by his brother professors who had known and loved him.—EDWARD DICEY.

Translate into English:—

II.—Ich aber merkte nun, daß es Prager Studenten waren, und bekam einen ordentlichen Respekt vor ihnen, besonders da ihnen das Latein nur so wie Wasser vom Munde floß. „Ist der Herr auch ein Studirter?" fragte mich darauf der Waldhorniſt. Ich erwiederte beſcheiden, daß ich immer beſondere Luſt zum Studiren, aber kein Geld gehabt hätte. „Das thut gar nichts," rief der Waldhorniſt, „wir haben auch weder Geld, noch reiche Freundſchaft. Aber ein geſcheuter Kopf muß ſich zu helfen wiſſen. Aurora musis amica das heißt zu deutſch: mit vielem Frühſtücken ſollſt du dir nicht die Zeit verderben. Aber wenn dann die Mittagsglocken von Thurm zu Thurm und von Berg zu Berg über die Stadt gehen, und nun die Schüler auf einmal mit großem Geſchrei aus dem alten finſtern Kollegium heraus brechen und im Sonnenſcheine durch die Gaſſen ſchwärmen—da begeben wir uns bei den Kapuzinern zum Pater Küchenmeiſter und finden unſern gedeckten Tiſch, und iſt er auch nicht gedeckt, ſo ſteht doch für jeden ein voller Topf darauf, da fragen wir nicht viel darnach und eſſen und perfectioniren uns dabei noch im Lateiniſchſprechen.—Eichendorff.

III.—Die Rache.

Der Knecht hat erſtochen den edeln Herrn,
Der Knecht wär' ſelber ein Ritter gern.

Er hat ihn erſtochen im dunkeln Hain
Und den Leib verſenket im tiefen Rhein;

Hat angeleget die Rüſtung blank,
Auf des Herren Roß ſich geſchwungen frank.

Und als er ſprengen will über die Brück',
Da ſtutzet das Roß und bäumt ſich zurück,

Und als er die güldnen Sporen ihm gab,
Da ſchleuderts ihn wild in den Strom hinab.

Mit Arm, mit Fuß er rudert und ringt
Der ſchwere Panzer ihn niederzwingt.

Uhland.

ENGINEERING SCHOLARSHIPS.—*Examiner, Professor James Thomson.*

GEOMETRICAL DRAWING.

[NOTE.—The numbers annexed to the several questions are values assigned to them, indicating their relative importance for the examination.]

1. To find the traces of the plane which passes through a given line and a given point, according to the method taught in Hall's Descriptive Geometry. (3.)

2. To find the traces of the plane which passes through a given line and a given point, in any case in which neither the traces of the given line, nor the traces of a line parallel to it passing through the given point, are accessible:—for instance, when the given line is nearly parallel to the "ground line," and when its traces, as also those of a line parallel to it through the given point, would be far beyond the limits of the available plane of delineation. (8.)

3. In Descriptive Geometry:—"Through a given point to draw a plane parallel to a given plane." (5.)

4. Work out one or other of the two following problems marked (*a*) and (*b*); but not both, as credit will be given for only one:—

(*a*) Draw carefully and neatly an approximate ellipse made up of four quadrantal circular arcs of two lengths of radii. The minor axis is to be three-fourths of the length of the major axis. (7.)

(*b*) Draw carefully and neatly an approximate ellipse made up of eight circular arcs of three lengths of radii, the minor axis being taken half the length of the major axis. (7.)

5. Specify distinctly what is the direction in which the rays of light are ordinarily assumed as falling for the delineation of shadows in engineering drawings. (7.)

6. Explain how, in Descriptive Geometry, to draw the projections of the straight line, indefinite as to length, which passes through a point whose projections are given, and is perpendicular to a plane whose traces are given. (2.)

7. Explain clearly any good method by which a perspective picture may be drawn when the original objects are given by horizontal and vertical projections of their points and lines (that is, in other words, by plans and elevations), the picture surface being a vertical plane, oblique to the vertical plane of projection. (9.)

8. If a true perspective picture of a house be given which shows the front and gable end—the picture plane being vertical; the house being of ordinary simple

Appendix No. 8.

Scholarship Examinations.

form, having the front and gable end made as vertical planes at right angels to each other; and having level straight lines shown on the front and also on the gable end; and the length and breadth of the house measured horizontally along the front and gable end being both given in feet; it is required to explain how the pole or centre of the picture, and the point of view or eye point may be found, and how the vertical heights shown in perspective in the picture, such as those of the front and gable, may be determined in feet.

You are advised to aid your explanations by diagrams or rough sketches illustrative of some of the steps; but not to attempt to work out accurately an example of the whole process, as that would probably prove tedious or impracticable with the paper and instruments which may be available to you. (11.)

9. Explain the nature of isometric drawing, and show how to make an isometric drawing of a house, supposing its dimensions to be sufficiently given. In this you should explain the distinction between the isometric and the natural scale. (3.)

10. Supposing a rectangular parallelepiped to be placed in proper position for being isometrically projected on a plane of delineation; determine accurately by geometrical construction the angle which any edge of it makes with the plane of delineation, and the angle which any of its faces makes with that plane. Also show how to draw the isometrical projection of any curve which may be given on one of the faces of the body. (5.)

SURVEYING, LEVELLING, MENSURATION, &c.

1. Compute the area of the entire plot of land shown surveyed in the accompanying leaf of a field book, and give your results in acres, roods, and perches. Tables for use in this computation will be supplied to you. (10.)

2. Explain the measurements and calculations which you would commonly use for taking out areas of fields or other tracts of land from maps. (4.)

3. Make out an example of a level field book containing assumed observations on the staff for at least ten points on the ground, or other fixed points (bench marks, for instance) whose levels are to be referred to a datum; and including the case in which several of the observations are made without moving the instrument to a new station: work out the reduced levels, and show how the calculations ought to be checked. (6.)

4. What is parallax in a theodolite or levelling instrument: when and how ought the adjustment for prevention of parallax to be made: and what is the precise condition of all things concerned, which is to be brought about by the carrying into effect of that adjustment. (6.)

5. What is the line of collimation in a theodolite? How ought it to be placed in the telescope of a Y theodolite? (5.)

6. With the theodolite offered to you, measure accurately the horizontal angles subtended at its station by the intervals between the several objects which will be pointed out to you; and check the correctness of your measurements by remeasuring the angles by a different part of the horizontal graduated circle. (12.)

7. What have you to state as to whether either Sir John Macneill's book of Earthwork Tables or Bidder's Table is to be preferred to the other in respect to the quantity of earth which each would give for the same cutting? Give reasons for what you state. (4).

8. Calculate the weight per yard of a rail of the cross section given in the drawing submitted to you, endeavouring to bring out the result without greater error than about two per cent. of the true weight; and counting wrought iron as weighing ·278 lbs. to the cubic inch. (5.)

9. Explain how, in surveying with the chain and without a theodolite or other angular instrument, a straight line may be ranged between two given points, vision and chaining along the line being both obstructed, but the ground being supposed to be open past the obstruction at one side. (5.)

10. Supposing a line to have been ranged as proposed in the foregoing question, show methods for checking the ranging and measurement of the line in two cases;—1st, with the use of the chain but no angular instrument; and 2nd, with the use of the chain and some kind of angular instrument. (4.)

Appendix, No. 8.

Scholarship Examinations.

CHEMISTRY.—*Examiner, Dr. Andrews.*

1. What are the laws according to which gases expand when heated? Are these laws strictly true?
2. Give an account of the specific heat of bodies, and state the relation which exists between the atomic weights and specific heats of the elementary bodies?
3. Explain clearly the cause of the fall of temperature during spontaneous evaporation.
4. Give an account of the relations between certain dark lines in the solar spectrum and the bright lines of the spectra of some of the metals.
5. How is carbonic oxide prepared, and what are its chief properties?
6. State the combinations and properties of cyanogen, and mention its more important compounds.
7. Contrast the properties of carbon and silicon, and of their compounds; showing in what respects they agree, and in what respects they differ from one another.
8. State the theory of volumes, and illustrate it by reference to the gaseous compounds of nitrogen and of carbon.
9. What are the tests for lime and magnesia, and the precautions to be attended to in separating those bases from one another?
10. What are the sources of alumina, and its chief properties?
11. Give an account of the more important alloys of copper?
12. How would you analyse an alloy of tin, silver, and copper?
13. What are the chief ores of zinc, and how is that metal obtained from them?
14. Describe Daniell's battery, and explain the cause of the constancy of its action.
15. What are the leading laws of diamagnetism?
16. Give an account of the construction of the thunder rod.

PRACTICAL CHEMISTRY.

1. How would you analyse a compound of baryta, lime, and magnesia, the bases being in the form of carbonates?
2. Describe the action of caustic potash on solutions of copper in presence of cane sugar and of diabetic sugar.
3. What is the action of a solution of cane sugar upon polarized light?
4. How would you distinguish an arsenical from an antimonial stain on porcelain?
5. What are the blow-pipe tests for the following bases:—Oxide of zinc, oxide of tin, oxide of iron, oxide of lead?
6. How are the sesquisalts of iron reduced to the state of protosalts?
7. Give an account of the principal reagents which will reduce the salts of silver in solution to the metallic state.
8. What are the tests for blood?
9. Describe the properties of cystine.

Appendix, No. 8.

Scholarship Examinations.

SCIENCE SCHOLARSHIPS.—FIRST YEAR STUDENTS.

MATHEMATICS.—*Examiner, Professor Purser.*

ARITHMETIC AND ALGEBRA.

1. Calculate to three places of decimals

$$\left(\frac{\sqrt{\frac{2}{3}}+\sqrt{\frac{3}{5}}}{\sqrt{\frac{2}{3}}-\sqrt{\frac{3}{5}}}\right)^{\frac{1}{2}}$$

2. Prove that if we calculate the circumference of a circle whose radius is 100 miles, using for the ratio of the circumference of a circle to the diameter the approximate value $\frac{355}{113}$ the result is not in error more than 4 inches.

3. Show by raising 2 to its powers that its logarithm to the base 10 lies between $\frac{3}{10}$ and $\frac{1}{3}$.

4. A trader lays by £10 a year. This he invests at the end of each year, together with the interest on his fresh savings, in a railway which returns 4 per cent. interest. Show that his accumulation in 30 years will amount to

$$250\left\{\left(\frac{26}{25}\right)^{30}-1\right\} \text{ pounds.}$$

5. Calculate the last result—

Given $\log(1{\cdot}04)=0{\cdot}01703$; $\log(3{\cdot}24265)=0{\cdot}51090$

6. The customary discount on a bill for £a for n months exceeds the true discount by £b. Find the rate of interest.

7. Solve the equation—

$$\frac{Lx^2+Mx+N}{lx^2+mx+n}=\frac{La^2+Ma+N}{la^2+ma+n}$$

8. Solve the equation—

$$\sqrt{1+x+x^2}+\sqrt{1-x+x^2}=a.x$$

9. Find the condition that the same values of x and y should satisfy the equations—

$$\left.\begin{array}{l} ax+by+c=0 \\ a'x+b'y+c'=0 \\ a''x+b''y+c''=0. \end{array}\right\}$$

10. Given—

$$\sqrt{x+y}+\sqrt{x-y}=\sqrt{a}$$
$$\sqrt{x^2+y^2}+\sqrt{x^2-y^2}=b$$

find x and y.

11. Exhibit $x^2+y^2+z^2-yz-zx-xy$ as the sum of two squares.

12. Show that the sum of the coefficients of the odd terms of the expansion of $(1+x)^n$ is equal to the sum of the coefficients of the even terms. Write down the coefficients of x^3y^4 in the expansion of $(1+x+y)^9$.

GEOMETRY AND TRIGONOMETRY.

1. Describe an equilateral triangle equal to a given rectilineal figure.

2. From the extremities of a diameter of a circle perpendiculars are let fall upon any chord, thus dividing it into three segments: prove that the extreme segments are equal.

3. Show that if the sides of a right-angled triangle are in geometric proportion, the perpendicular let fall from the right angle on the base divides it in extreme and mean ratio.

4. Prove the identity

$$\sin(\alpha-\beta)\sin(\gamma-\delta)+\sin(\alpha-\gamma)\sin(\delta-\beta)+\sin(\alpha-\delta)\sin(\beta-\gamma)=0.$$

5. Find two angles whose tangents shall bear to each other a given ratio, such that the difference of the angles shall be the greatest possible. *Appendix, No. 8.*

6. Two angles, θ and ϕ, each less than a right angle, constantly satisfy the relation $a \tan\theta + b \tan\phi = c$, where $a\ b\ c$ are given positive constants. Prove that $a \sec\theta + b \sec\phi$ is least when $\theta = \phi$. Scholarship Examinations.

7. Show that

$$\tan^{-1}\frac{2x-y}{\sqrt{3}.y}+\tan^{-1}.\frac{2y-x}{\sqrt{3}.x}=\frac{\pi}{3}$$

8. Prove that in any triangle

$$(a+b)^2\sin\frac{C}{2}+(a-b)^2\cos^2\frac{C}{2}=c^2$$

$$\frac{1}{ac}-\frac{1}{bc}=\frac{1}{ab}.\ \frac{\sin\frac{B-A}{2}}{\cos\frac{C}{2}}$$

9. Prove that if $A+B+C=180°$

$$\cos A=\sqrt{(\sin A+\sin B+\sin C)(\sin B+\sin C-\sin A)\ 4\sin B\sin C}$$

10. Express the length of a line drawn from the vertex of a triangle to meet the base in terms of the area of the triangle and of the perpendiculars let fall on the line from the extremities of the base.

11. From two points, O and O', are dropped three pairs of perpendiculars on the sides of a triangle—P,P' Q,Q' R,R', are the corresponding feet. Show that $PP' \sin A + QQ' \sin B \pm RR' \sin C = 0$.

[Any line such as PP' being counted positive if in direction ABC, negative if in opposite direction.]

12. Show that the length of the side of a regular figure of 16 sides inscribed in a circle

$$=R.\sqrt{2-\sqrt{2+\sqrt{2}}}$$

Second Year Students.

Mathematics.—*Examiner, Professor Purser.*

Algebra, Trigonometry, &c.

1. Eliminate x and y from the equations

$$\left.\begin{aligned} ax^2+bxy+cy^2&=d\\ a'x^2+b'x+\ c\ y&=d'\\ a''x^2+b''xy+c''y^2&=d'' \end{aligned}\right\}$$

2. Prove that

$$\frac{a^m+b^m+c^m}{3}>\left(\frac{a+b+c}{3}\right)^m$$

when a, b, c, are positive quantities, and m is positive and greater than unity.

3. Resolve $x^{2n}-2x^n\cos\theta+1$ into its quadratic factors.

4. Prove that in any triangle

$$B=\frac{b}{c}\sin A+\frac{b^2}{2c^2}\sin 2A+\frac{b^3}{3c^3}\sin 2A+\&c.$$

b being less than c.

5. Assuming the factorial form of $\sin\theta$ investigate the sum of the series

$$\frac{1}{1^2}+\frac{1}{2}+\frac{1}{3}+\&c.$$

Examine generally the convergency or divergency of the series

$$\frac{1}{1^n}\quad\frac{1}{2^n}+\frac{1}{3^n}+\&c.$$

Appendix, No. 8.

Scholarship Examinations.

6. Explain the method of eliminating $(n-1)$ variables from n linear equations, and show how to reduce to this problem that of eliminating x between any two algebraic equations.

7. Prove that $(\alpha-\beta)^2\ (\beta-\gamma)^2\ (\gamma-\alpha)^2 = 4q^3+27\ r^2$ where α, β, γ, are the roots of $x^3+qx+r=0$.

8. Two lines are given in position, it is required to draw a circle passing through a fixed point A, and through the intersection of the lines, so that the length of the line joining the other points where it meets the given lines may be the least possible.

DIFFERENTIAL CALCULUS.

1. Prove that $\frac{d}{dx}(x^n) = nx^{n-1}$ for all values of n without assuming the binomial theorem for other than positive integral exponents.

2. Investigate from first principles the differential coefficients of $\cos x$, $\tan^{-1}x$, $\log_a(x)$.

3. Differentiate

$$\frac{(2x^2-1)\sqrt{1+x^2}}{3x^3} \qquad \frac{\sin\theta}{\cos\theta} + \frac{1}{4}\log\frac{1-\sin\theta}{1+\sin\theta} \qquad \frac{e^x+e^{-x}}{e^x-e^{-x}}$$

CO-ORDINATE GEOMETRY.

1. Investigate by Co-ordinate Geometry the locus of a point such that if perpendiculars be dropped from it on the sides of an equilateral triangle, the sum of their squares shall be constant.

2. The equations of the sides AB, BC, CA of a triangle are respectively

$$y+3x-9=0 \qquad x+y-3=0 \qquad y-x-1=0$$

Determine the position of the angle C, and the three lines drawn through this point; (1) to bisect the angle; (2) to bisect the opposite side; (3) to cut the opposite side at right angles.

3. Examine the formula for transferring from rectangular co-ordinates to oblique, the origin and the axis of x remaining unaltered.

4. Interpret the equations

(1) $x^2+y^2-6x=0$

(2) $(x-x')\ (y-y'') = (x-x'')\ (y-y')$

(3) $x^2-y^2=0$

CONIC SECTIONS.

The Propositions to be proved Geometrically.

1. Tangents at the extremity of any chord of a conic intersect on the diameter which bisects the chord.

2. A parabola is inscribed in a triangle, find the locus of its focus.

3. If a circle and conic section intersect in four points, their common chords will be equally inclined to the axis. Prove this, and examine the limiting case of this theorem when three of the points of meeting coincide.

4. The parameter of the section of a given cone varies as the perpendicular let fall on the section from the vertex of the cone.

5. A line is cut harmonically by the conic pole and polar.

6. If a hexagon be inscribed in a conic, the three pairs of opposite sides intersect in three points which lie in a straight line.

7. Two fixed points, S and H, are the foci of a variable ellipse, two other fixed points, S' and H', on the same straight line are the foci of another variable ellipse, drawn so as to touch the first, find the locus of their point of contact.

CHEMISTRY—*Examiner, Dr. Andrews.*

1. Give an account of the laws of isomorphism, and of their application to the fixing of the rational composition of minerals.
2. What are the exceptions to the two-volume theory of Gerhardt? Can they be explained?
3. How could you determine the amount of soda or potash in a mineral not attacked by hydrochloric acid?
4. What are the sources of rubidium and cæsium? Describe generally the methods of preparing them, and their characteristic properties.
5. Give a full account of the action of certain organic solutions on polarized light.
6. How is the atomic weight of a vegetable alkali determined?
7. Describe the process of dialysis, and its applications.

MEDICAL SCHOLARSHIPS.—SECOND YEAR STUDENTS.

CHEMISTRY.—*Examiner, Dr. Andrews.*

1. What are the laws according to which gases expand when heated? Are these laws strictly true?
2. Give an account of the specific heat of bodies, and state the relation which exists between the atomic weights and specific heats of the elementary bodies?
3. Explain clearly the cause of the fall of temperature during spontaneous evaporation.
4. Give an account of the relations between certain dark lines in the solar spectrum and the bright lines of the spectra of some of the metals.
5. How is carbonic oxide prepared, and what are its chief properties?
6. State the combinations and properties of cyanogen, and mention its more important compounds.
7. Contrast the properties of carbon and silicon, and of their compounds; showing in what respects they agree, and in what respects they differ from one another?
8. State the theory of volumes, and illustrate it by reference to the gaseous compounds of nitrogen and of carbon.
9. What are the tests for lime and magnesia, and the precautions to be attended to in separating those bases from one another?
10. What are the sources of alumina, and its chief properties?
11. Give an account of the more important alloys of copper.
12. How would you analyse an alloy of tin, silver, and copper?
13. What are the properties of the oxides of mercury?
14. Give an account of the volatile vegetable alcaloids, stating their composition, sources, and leading properties.
15. Contrast the properties of a calculus composed of ammoniaco-magnesia phosphate, with those of one composed of urate of soda.
16. How would you examine urine for creatinine?

ANATOMY AND PHYSIOLOGY.—*Examiner, Dr. Redfern.*

1. Name the specimens numbered 1 to 12, and the side of the body to which each belongs.
2. Describe the attachment, insertion, character, relations, and action of the flexor carpi ulnaris muscle.
3. Describe the position, course, and relations of the femoral artery in the upper third of the thigh.
4. Describe the structure of *striated* and *non-striated* muscle, and state the objections to these kinds of muscle being called *voluntary* and *involuntary*.
5. What modifications occur in the character of the stream of blood as it flows onwards from the heart, and how are they produced?

Appendix, No. 8.

Scholarship Examinations.

BOTANY.—*Examiner, Dr. Wyville Thomson.*

1. Describe in detail the structure of an acorn.
2. Describe and contrast a cypsela, a mericarp, an achene, and a caryopsis.
3. Describe the movements which are seen to occur within the vegetable cell, and state any causes which have been suggested for these movements.
4. Describe the structure of the flower in any three British genera of grasses.
5. Describe the mode of reproduction of the genus fucus.
6. Give the character and sketch the geographical distribution of the natural orders Coniferæ, Amentiferæ, and Cupuliferæ.

ZOOLOGY.

1. Describe the principal modifications of the respiratory organs among the vertebrata.
2. Describe the mode of development of a feather.
3. Contrast the dentition of the elephant with that of one of the typical rodents.
4. Name in order, from before backwards, the paired appendages of one of the decapodous crustacea, describing the structure and stating the functions of each pair.
5. Describe the intimate structure and mode of development and reproduction of any sponge.
6. Contrast the structure of the rotifera with that of the infusoria.

THIRD YEAR STUDENTS.

ANATOMY AND PHYSIOLOGY.—*Examiner, Dr. Redfern.*

1. Name the specimens numbered 1 to 6. State to which side of the body each belongs, and describe the characters of the markings on which your opinion is founded.
2. Describe the course and relations of the brachial artery at the bend of the elbow; and the origin, course, and relations of such unusual branches of artery, as become superficial at that part.
3. Describe the appearances presented to the eye on a vertical section from the outer to the inner edge of the kidney.
4. What constituents of bread, potatoes, oatmeal, milk, eggs, and flesh, respectively, serve for nutrition? How are they used in the economy? To what tissues are they applied?
5. Describe the size, shape, connections and relations of the pharynx; and the general characters of the openings into it.

FOURTH YEAR STUDENTS.

ANATOMY.

1. Describe the sphenoidal and the orbital process of the palate bone.
2. Describe the course of the pudic artery in the perineum, and the unusual conditions of its branches which cause increased danger in lithotomy.
3. Describe the course, relation, and distribution of the glosso-pharyngeal nerve, and its branches outside the cranium.
4. Describe a method of dissection which will expose the part of the adductor magnus muscle covered by the insertion of the adductor longus. Mention each part in the order in which it is met with, and state the position it occupies in the space dissected.

PHYSIOLOGY.

1. State what is known of the origin, course, general characters, and structure of the bile ducts within the liver.
2. Describe the first formed blood corpuscles of the human embryo. At what parts of the body and in what way are blood corpuscles formed in the adult.
3. Enumerate the functions of the trunks and branches of each of the cranial nerves.
4. Enumerate the various matters excreted by the human body, and state the objects which you suppose to be gained by the ejection of the several constituents of these matters.

THEORY AND PRACTICE OF MEDICINE.—*Examiner, Dr. Cuming.*

1. What is the cause of the diarrhœa of Typhoid Fever, and on what principles should its treatment be conducted?
2. What are the physical signs of permanent patency of the aortic valves?
3. Explain the views of Bright, and those of Traube, as to the connexion between Hypertrophy of the Heart and Morbus Brightii.
4. What general and local treatment would you employ in a case of Diphtheria?
5. How would you distingnish between Acute Peritonitis and its hysterical counterfeit?
6. How may Pneumothorax be caused?
7. What are the symptoms of progressive locomotor Ataxy?

MATERIA MEDICA.—*Examiner, Dr. Seaton Reid.*

1. How are expectorant medicines classified?
2. What have you to ascertain respecting your patients before you decide which class you shall use?
3. Write prescriptions for two of each class, for an adult and for a child.
4. Name our cholagogue medicines?
5. Write a prescription for the use of each by an adult.
6. What are alterative medicines?
7. Name three of them.
8. Write prescriptions for the use of each by an adult.
9. How many grains are in the ounce in use at present?
10. How many grains are in a "gramme?"
11. How much does a "litre" contain?
12. What is the meaning of the terms, "Endermic," "Tatroliptic," and "Hypodermic?"
13. Name the medicines on the table, and classify them therapeutically.

SURGICAL ANATOMY.—*Examiner, Dr. Gordon.*

1. Describe briefly the perineum and ischio-rectal region, the parts within them, and their surgical diseases.
2. Describe the structure, anatomical relations, and diseases of the thyroid body.
3. Describe the operation of tracheotomy, mentioning briefly those distributions of vessels which make this operation unusually dangerous.

MEDICAL JURISPRUDENCE.—*Examiner, Dr. Hodges.*

1. Mention the symptoms produced by a poisonous dose of muriatic acid.
2. Describe the processes required for the detection of muriatic acid, when mixed with organic matters.
3. In what cases in the treatment of poisoning is the employment of the stomach pump to be avoided.
4. What are the symptoms produced by the following poisons: Savin, aconite, belladonna.
5. Describe the methods to be employed for the quantitative determination of arsenic in organic liquids.
6. Describe the characters of nitro-benzole, and the methods by which it may be distinguished from oil of almonds and other liquids.
7. State the symptoms of poisoning by the essential oil of bitter almonds.

Appendix, No. 8.

Scholarship Examinations.

Law Scholarships.—First Year Students.

English Law.—*Examiner, Professor Molyneux.*

REAL PROPERTY.

1. In what case is it necessary that a lessor should be invested with a leasing power, operating under the statute of uses, to give validity to his demise of land?

2. A dies entitled to land in fee-simple inherited from his deceased mother, leaving his father and maternal grand-uncle his sole surviving kindred. Upon whom will the inheritance devolve, and upon what rules of descent does the right depend?

3. What is the nature of the title, and what are the incidents of a demise, of which the only evidence is payment of rent?

4. What is the object of long terms of years introduced into settlements, and how is that object capable of being realized?

5. What is the difference in legal incidents between a rent reserved on a grant in fee-simple, and a rent reserved on a lease for a thousand years?

6. "The said A. B. doth hereby grant the lands of Blackacre to B. for ever." What interest passes to the grantee by such a deed?

7. Tenant for life, remainder to B in fee-simple; wrongful possession against the tenant for life, during thirty years, down to the time of his death. What are the respective legal rights of the wrongdoer and the remainderman?

8. What is the proper technical assurance by which a *joint tenant* can transfer his interest to his co-tenant, and how does it differ from that by which a *tenant in common* vests *his* interest in his co-tenant, and what is the reason of the difference?

9. Upon what principle were ejectments for non-payment of rent maintainable at common law, and what acts were necessary to entitle the lessor to recover in such ejectments?

10. What was the difference in the terms necessary to create an estate of inheritance in a common law conveyance, and those sufficient for that purpose in a will before 7 Wm. IV. and 1 Vict., ch. 26?

11. What principle, involved in the doctrine of powers, rendered legislative enactment necessary to enable assignees of Bankrupts and Insolvents to appoint?

12. Estate limited to A for life, remainder to B for life, remainder to the right heirs of A, remainder to C and his heirs. What estates do the several persons named take respectively?

13. In what instances is the "*Cy Près*" doctrine appliable?

14. State one or more instances in which the technical rules of construction of wills have been modified by the 7 Wm. IV. and 1 Vict., ch. 26, in order the better to effectuate the intentions of testators?

15. A conveys land by feoffment to B and his heirs. A also conveys *other* lands by feoffment to B and his heirs, to the use of B and his heirs. How do these grants respectively operate?

16. State cases in which (by statutes) an interest in real estate will pass *inter vivos* without a conveyance or other common law assurance?

17. Devise to B and his heirs, on the death of A, without A leaving issue him surviving at the time of his death. Devise in the same will of another denomination of land to A and the heirs of his body, and if he should die without issue, remainder to B and his heirs. What difference existed at common law, as to the legal effect of a conveyance by B of those several interests during the life of A, and what was the reason of such diversity?

Second Year Students.

EQUITY.

1. What are the general conditions under which alone relief will be granted in Equity upon mistake *in fact?*

2. Prove that the decided cases which appear to violate the maxim, "ignorantia legis non excusat" do not really contravene it.

3. If a contract be obtained by fraud, what would be the respective decrees,

according as the fraudulent or the innocent contractor may be the person seeking relief from a Court of Equity?

4. A obtains the conveyance of an estate from B by fraud, and A sells the estate to a purchaser; will Equity, in every case, relieve B and set aside such conveyance, and annul the sale to the purchaser? State in what instances the Court would or would not do so.

5. When is a conveyance of property deemed fradulent and void as against purchasers for valuable consideration; and when against creditors, distinguishing the action of Courts of Equity, under statutable provisions from that which prevailed before, and which still avails suitors, independent of such enactments?

6. When is a settlement said to be in fraud of the husband's marital rights?

7. State in what instance will the registration of a deed not protect a purchaser?

8. What are the limitations to the equitable principle that contracts in restraint of trade are void?

9. With respect to the exercise of jurisdiction by Courts of Equity on the grounds of *suggestio falsi* and *suppressio veri* respectively, which is more extensive in its application, and why?

10. In what classes of cases do Courts of Equity exercise concurrent jurisdiction with Courts of Common Law, and how is such concurrent authority reconcilable with the notion that the jurisdiction in Equity arises when remedies at Common Law fail?

11. Is there any foundation for the popular idea that Courts of Equity are invested with arbitrary or unlimited authority? Are there any obligations which cannot be forced either at Law or in Equity?

12. State some instances of constructive fraud, and why are transactions which fall within that definition impeachable in Equity, although not based upon any moral delinquency?

13. To what extent is the maxim, "*caveat emptor*" recognised by Courts of Equity in their adjudications upon contracts impeached on the ground of fraud?

14. In what case will a contract with a lunatic be recognised?

15. Is there any class of cases in which a Court of Equity will not set aside a contract obtained by fraud, although the parties do not stand *in pari delicto*?

Third Year Students.

COMMON LAW.

1. How does the question of partnership vary as one between partners *inter se* and with regard to third persons.

2. How do Courts of Equity and Courts of Law differ with respect to the liability of married women, upon contracts made by them?

3. What warranty is *implied* in every marine insurance on a voyage policy?

4. What is the difference between a contract of freightment by charter party, and that of a bill of lading?

5. Why is it expedient on the part of the vendor to observe the usage of conveyancers, by having inserted in his conveyance a covenant for title on his part against his own acts, and is there any state of facts under which he will be liable beyond the terms of his covenant?

6. A. B. makes a lease of Blackacre, by deed, to C. D., at £20 per annum. A. B. afterwards demises Whiteacre to the same C. D., as tenant from year to year, at £20 rent. After some years A. B. writes a letter to C. D., by which he proposes to reduce the rents to £10 respectively, and receives the reduced rents for some years. A. B., upon a subsequent gale of rent falling due, demands it at the original rate of £20 for each denomination, and sues the tenant accordingly. The tenant resists the demand. What must be the legal result?

7. An agent without disclosing his agency, purchases for his principal without paying the price. What is the full extent of the vendees' rights upon the contract?

8. Two bills of exchange are accepted, payable on the 1st March, 1867. The drawer has a running account with the acceptor, varying from day to day, and on foot of which the bills were accepted. The drawer indorses one bill to X. Y., in the course of trade, on the 20th April, and for valuable considera-

Appendix, No. 8.

Scholarship Examinations.

tion; and on the 2nd March indorses the other bill to X. Y., for valuable consideration. The indorsee brings his action on both bills against the acceptor, who defends the action on the ground that the balance of account between him and the drawer was against the latter from the 10th April, continuously. What are the legal rights of the indorsee with respect to those bills?

9. State some of the instances in which a promise to pay is *implied* in dealings between man and man.

10. What are the usual incidents to create a legal tender? Under what circumstances does the law dispense with such incidents?

11. What is the difference between the remedies upon contracts for the sale of lands, as administered at Law and in Equity respectively?

12. What classes of debts can alone be set off?

13. What is a good, and what a bad accord by way of defence to an action for recovery of a debt?

14. When different debts are due to the same person, and a part payment made, to which of the debts is that payment to be appropriated?

Senior Scholarships.

Modern Languages.—*Examiner, Professor Meissner.*

FRENCH.

Translate into French:

I.—The human species, according to the best theory I can form of it, is composed of two distinct races, *the men who borrow and the men who lend.* To these two original diversities may be reduced all those impertinent classifications of Gothic and Celtic tribes, white men, black men, red men. All the dwellers upon the earth, "Parthians and Medes, and Elamites," flock hither, and do naturally fall in with one or other of these primary distinctions. The infinite superiority of the former, which I choose to designate as the *great race*, is discernible in their figure, port, and a certain instinctive sovereignty. The latter are born degraded. There is something in the air of one of this cast, lean and suspicious; contrasting with the open, trusting, generous manners of the others. . . . To one like Elia, whose treasures are rather cased in leather covers than closed in iron coffers, there is a most formidable class of alienators; I mean your *borrowers of books*, those mutilators of collections, spoilers of the symmetry of shelves, and creators of odd volumes. Reader, if haply thou art blest with a moderate collection, be shy of showing it; or if thy heart overfloweth to lend them, lend thy books, but let it be to such a one as S. T. Coleridge. He will return them with usury, enriched with annotations tripling their value.—Charles Lamb.

II.—(*a*) Give a short summary, in French, of some one play of Corneille, of Racine, and Voltaire.

(*b*) Give a short sketch of the life of Alfred de Vigny.

(*c*) Give some instances of Latin archaisms, lost in classical Latin, but preserved in modern French.

(*d*) When does the intercalation of *b* and *d* take place? Give examples.

(*e*) French substantives are derived from what Latin parts of speech.

GERMAN.

Translate into German:

I.—Identical in race and scarcely differing in language, the Irish of the North and the Scotts of the Western Isles had for two centuries kept up a close and increasing intercourse. Some thousand Scottish families had recently emigrated from Bute, Arran, and Argyleshire, to find settlements on the thinly-populated coasts of Antrim and Down. The Irish chiefs had sought their friendship, intermarried with them, or made war on them as the humour of the moment prompted; but their numbers had steadily

increased, whether welcome or unwelcome, and at Elizabeth's accession they had become objects of alarm both to the native Irish whom they threatened to supplant and to the English whom they refused to obey.—J. A. FROUDE.

Appendix, No. 8.

Scholarship Examinations.

Translate into English:

II.—Die Komödie will durch Lachen bessern; aber nicht eben durch Verlachen; nicht gerade diejenigen Unarten, über die sie zu lachen macht, noch weniger bloß und allein die, an welchen sich diese lächerliche Unarten finden. Ihr wahrer allgemeiner Nutzen liegt in dem Lachen selbst, in der Uebung unserer Fähigkeit das Lächerliche zu bemerken; es unter allen Bemäntelungen der Leidenschaft und der Mode, es in allen Vermischungen mit noch schlimmern oder mit guten Eigenschaften, sogar in den Runzeln des feierlichen Ernstes, leicht und geschwind zu bemerken. Zugegeben, daß der Geizige des Moliere nie einen Geizigen, der Spieler des Regnard nie einen Spieler gebessert habe; eingeräumt, daß das Lachen diese Thoren gar nicht bessern könne: desto schlimmer für sie, aber nicht für die Komödie. Ihr ist genug, wenn sie keine verzweifelte Krankheiten heilen kann, die Gesunden in ihrer Gesundheit zu befestigen. Auch dem Freigebigen ist der Geizige lehrreich! auch dem der gar nicht spielt, ist der Spieler unterrichtend.—Lessing.

III.—Herodes.

Ich würde nicht den Muth zur Antwort haben,
Wenn ich, was ich auch immer wagen mochte,
Des Ausgangs nicht gewiß gewesen wäre,
Das war ich aber und ich war es nur,
Weil ich mein Alles auf das Spiel gesetzt!
Ich that, was auf dem Schlachtfeld der Soldat
Wohl thut, wenn es ein Allerletztes gilt,
Er schleudert die Standarte, die ihn führt,
An der sein Glück und seine Ehre hängt,
Entschlossen von sich in's Gewühl der Feinde,
Doch nicht, weil er sie preiszugeben denkt:
Er stürzt sich nach, er holt sie sich zurück,
Und bringt den Kranz, der schon nicht mehr dem Muth,
Nur der Verzweiflung noch erreichbar war,
Den Kranz des Siegs, wenn auch zerrissen, mit.

Hebbel.

IV.—Write a short summary, in German, of Jean Paul's *Advocat Siebenkäs*.

ITALIAN.

I.—Translate into Italian:

Before the invention of the art of Printing, the only employment by which a man of letters could make anything by his talents, was that of a public or private teacher, or by communicating to other people the curious and useful knowledge which he had acquired himself, and this is still surely a more honourable, a more useful, and, in general, even a more profitable employment than that other of writing for a bookseller, to which the art of printing has given occasion. The time and study, the genius, knowledge, and application requisite to qualify an eminent teacher of the sciences, are at least equal to what is necessary for the greatest practitioners in law and physic. —ADAM SMITH.

II.—Translate into English:

Ho visitato le mie montagne, ho visitato il lago de'cinque fonti, ho salutato per sempre le selve, i campi, il cielo. O mie solitudini! o rivo, che mi hai la prima volta insegnato la casa di quella fanciulla celeste! quante volte ho sparpagliato i fiori su le tue acque che passavano sotto le sue finestre! quante volte ho passeggiato con Teresa per le tue sponde, mentr' io inebbriandomi delle voluttá di adorarla, vuotava a gran sorsi il calice della morte.—LETTERE DI JACOPO ORTIS.

Appendix No. 8.

Scholarship Examinations.

III.—Ahi Pisa, vituperio delle genti
Del bel paese là dove il Si suona ;
Poi che i vicini a te punir son lenti,
Movasi la Capraja e la Gorgona,
E faccian siepe ad Arno in su la foce,
Si ch' egli annieghi in te ogni persona.
Che se il Conte Ugolino avea ria boce
D' aver tradita te delle castella,
Non dovei tu i figliuoi poree a tal croce,
Innocenti facea l' età novella
Novella Tebe, Uguccione e il Brigata,
E gli altri duo che il canto suso appella.

DANTE—*Inferno.*

HISTORY.—*Examiner, Professor Yonge.*

1. What were the circumstances of the establishment of Magna Charta? What steps were subsequently taken to confirm it?
2. Between the reigns of John and Charles I. what kings of England had provoked their subjects to active resistance?
3. What were the circumstances that led to the death of Lady Jane Grey?
4. What resemblance was there between the causes which led to the rebellion against Charles I., and those which led to the rebellion against James II., and who were the original movers of the two movements?
5. What was the South Sea Bubble in England, and what nearly contemporaneous events in France did it resemble?
6. What were the circumstances under which the Septennial Act was passed? Who were the chief Ministers at the time?
7. What were the priniciples contended for by the Ministry and the Opposition in the debates on the Regency Bill of 1788?
8. In French History what was the conspiracy of Cinq Mars? What the Day of Dupes?
9. Describe the rebellion of the Fronde.
10. Who were Sully, Louvais, Colbert, Cardinal Dubois, Cardinal Fleury, Marshal Saxe, the Prince de Soubise, Turgot, d'Epremesnil, Mirabeau? (Two lines about each will be sufficient).
11. Who were the Encyclopedists, and what was their influence on the French people, and on subsequent events?
12. What French generals won or lost the battles of Ivry, Rocroy, Senef, Nordlingen, Nierwinden (or Landen), Dettingen, Rosbach, Fleurus?

SUBJECT FOR ESSAY.

(*Not to exceed four pages.*)

THE DIFFERENCE, AND CAUSES OF THE DIFFERENCE, BETWEEN THE ENGLISH REVOLUTION AND THE FIRST FRENCH REVOLUTION.

BOTANY.—*Examiner, Dr. Wyville Thomson.*

1. Describe the structure of the flower in the genera, avena, melica, phalaris, and agrostis.
2. Describe minutely the structure and the mode of development of the cocoa-nut (fruit).
3. Describe a lycopodium, stem, leaves, and fruit.
4. State what is known with regard to the origin and development of the embryo in flowering plants.
5. What are the differences in composition between the crude and the elaborated sap? How have these changes been produced?
6. Sketch the geograpical distribution of the most important groups and genera of the compositæ.

ZOOLOGY.

1. Describe the condition of the placenta in the rat, the cat, the hare, the cow, and the monkey.

2. Describe the modifications of the sternum in the different vertebrate groups.

3. Give in detail the characters of the different groups of the amphibia, and contrast the amphibia with (1) reptiles and (2) fishes.

4. Name in order from before backwards the paired appendages of any one of the typical arachnida, and state their homologies.

5. Describe the arrangement of the viscera in doris, and contrast it with their arrangement in buccinum or fusus.

6. Describe the development of the centres of the vascular system in the embryo of the dog or any other mammal.

7. Give the orders of the hydrozoa, and state the modifications of the reproductive process which are met with in each.

DUBLIN : Printed by ALEXANDER THOM, 87 & 88, Abbey-street,
For Her Majesty's Stationery Office.

THE REPORT

OF THE

PRESIDENT

OF

QUEEN'S COLLEGE, CORK,

FOR

THE YEAR ENDING 31ST MARCH, 1869;

WITH APPENDICES A TO K INCLUSIVE.

Presented to both Houses of Parliament by Command of Her Majesty.

DUBLIN:
PRINTED BY ALEXANDER THOM, 87 & 88, ABBEY-STREET,
FOR HER MAJESTY'S STATIONERY OFFICE.

1869.

CONTENTS.

Page

1. REPORT, ...

2. APPENDIX A.—General Regulations of the College; List of Officers; Programme of Courses for Matriculation and Scholarship; Hours of Lectures; Special Courses for Competitive Examinations and for the Public Service; University Examinations, &c., ... 9

3. APPENDIX B.—Selection of Papers of Questions used at the Sessional Examinations, ... 37

4. APPENDIX C.—List of Students who obtained Honors or Prizes at the Sessional Examinations held in June, 1868, ... 66

5. APPENDIX D.—Selection of Papers of Questions used at the Scholarship Examinations, held in October, 1868, ... 67

6. APPENDIX E.—Table giving list of Classes, number of Lectures and of Students attending same, in the Session 1868–69, ... 88

7. APPENDIX F.—Special Reports of Professors, with form of Circular from President, ... 88

8. APPENDIX G.—List of University Degrees, Diplomas, and Honors, obtained by Students of Queen's College, Cork, at the Commencements in June and October, 1868; also the Peel Exhibitions, ... 93

9. APPENDIX H.—Special Report of the Librarian, ... 99

10. APPENDIX I.—Copies of the several Accounts furnished by the Bursar, showing the financial position of the College, to 31st March, 1869, ... 100

11. APPENDIX K.—Report of the Vice-President on Discipline; the Registrar's Return of Punishments; Reports of the Deans of Residences for the several Religious Denominations, ... 101

THE REPORT

OF THE

PRESIDENT OF QUEEN'S COLLEGE, CORK,

FOR

THE YEAR ENDING 31ST MARCH, 1869.

TO THE QUEEN'S MOST GRACIOUS MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

In compliance with the provisions of the Act of Parliament, founding the Queen's Colleges, and of the Charter of Queen's College, Cork, I have the honour to submit the following Report of the Proceedings of that College, and the Condition of its several Departments during the year terminating 31st March, 1869.

1. EXAMINATIONS FOR ENTRANCE—NUMBERS AND CLASSIFICATIONS OF STUDENTS.

The Examinations for Entrance were held in the usual manner at the commencement of the Session in October, 1868, and on subsequent days, as arranged by the College Council. The regulations to this effect are given in the Prospectus of the Session, of which a copy is annexed (Appendix A).

After those examinations 59 new Students were admitted as Matriculated Students to the First Year's Class, as were also 28 Students who had previously matriculated, but who, from not having been promoted, or from other causes, being disqualified from proceeding with the higher studies of a Senior Class, were required to re-enter the more elementary Course. The total number of Matriculated Students in the First Year's Class for the Session 1868–69 was, therefore, 87.

In addition to the above, there presented themselves to proceed with the studies of the senior years, 129 students who had passed the Sessional Examination at the close of the previous academic year. The total number of Matriculated Students in Queen's College, Cork, for the year 1868-69, was, therefore, 216.

Besides the above 216 Matriculated Students, there entered to attend the lectures of particular professors 28 Non-Matriculated Students. The total number of Students attending the College during the Session 1868-69 was, therefore, 244.

The classification of those Students by their collegiate standing

is shown in the following table, which will also show, for comparison, the corresponding numbers for the previous year.

Courses of Study in order of College standing.		Session, 1867–68.	Session, 1868–69.
Matriculated Students,	Course of First Year,	104	87
	Course of Second Year,	52	60
	Course of Third Year,	47	44
	Course of Fourth Year,	38	25
Total number of Matriculated Students,		235	216
Non-Matriculated Students,		12	28
Total number of Students,		247	244

In respect to Faculties and courses of study for Degrees and Diplomas, the Classification of the Students who attended the College during the Session (1868-69) was as follows:—

	Matriculated.	Non-Matriculated.	Total.
In the Faculty of Arts,	47	5	52
In the Faculty of Medicine,	140	16	156
In the Faculty of Law,	10	–	10
In the Faculty of Engineering,	27	7	34
Total,	224	28	252

The above number exceeds that previously given as the total number of Matriculated Students by 8, from the fact that some Students entered for the courses of more than one Faculty at the same time. There were thus entered for—

Arts and Medicine,	5
Arts and Law,	2
Arts and Engineering,	1
Total,	8

The ages of the new Students who entered for the Session 1868-69 were as follows:—

14 Years,	1	19 Years,	3
15 Years,	1	20 Years,	4
16 Years,	12	21 Years and over,	9
17 Years,	19		
18 Years,	10	Total,	59

Of the total number of Matriculated Students on the roll for the Session 1868-69, there are 147 under the age of 21 years, and 69 over that age.

2. College Examinations for Sessional Promotion of Students from the Session 1867-68, and for Scholarships in the Session 1868-69.

The Examinations for sessional promotion were held at the close of the Session 1867–68, with the following results:—

Faculty.	Promoted.	Not promoted.	Total.
Arts,	36	22	58
Law,	12	3	15
Engineering,	15	13	28
Total,	63	38	101
Fourth Year's Arts Students,			10
Faculty of Medicine,			140
Total,			251
Of which in more than one Faculty,			16
Total number of Matriculated Students,			235

Those examinations were conducted by printed papers, of which a selection is given in Appendix B, and prizes were awarded by the College Council to those Students who had been specially recommended by the examining Professors. The names of those who received such Sessional honors and prizes are given in the Appendix C.

The Examinations for Scholarships for the Session 1868-69, were carried on, as usual, under the direction of the College Council, with the following results:—

Of the 7 Senior Scholarships in Arts 6 were awarded.
Of the 30 Junior Scholarships in Arts 19 were awarded.
Of the 8 Scholarships in Medicine 8 were awarded.
Of the 3 Scholarships in Law 3 were awarded.
Of the 5 Scholarships in Engineering 4 were awarded.

The Examinations for these Scholarships were conducted principally by printed papers. The subjects of examination are prescribed in the Prospectus (Appendix A), and the more important papers of questions are given in Appendix D.

3. Courses of Instruction.

The detailed list of Classes, the number of lectures delivered by each Professor, and the number of Students attending each class are given in the Table, Appendix E. Further particulars as to the special departments will be found in the Reports of the several Professors hereto annexed, forming Appendix F.

4. Queen's University Examinations and Peel Exhibitions.

Such Students as had suitably completed their collegiate career were recommended to the Senate of the Queen's University to be examined for their respective Diplomas and Degrees. The names of those Students of Queen's College, Cork, who obtained Degrees or Diplomas at the University Examinations in June and October, 1868, and also the names of those who obtained University honors at those Examinations, are given in Appendix G.

At the close of the First University Examination in Arts in October, 1868, 7 Students from Cork College passed in Arts, of whom 2 obtained first-class honors, 2 third-class honors, and 3 were unclassed. In Engineering 5 passed, of whom 2 obtained first-class honors (1 first place), 2 third-class honors, and 1 was unclassed.

The following Exhibitions from the Peel Endowment Fund were awarded at those examinations to the following students from Queen's College, Cork:—

Michael Finucane, first, obtained £20 per year for three years.
Thomas Horan, second, obtained £10 per year for three years, as second in Mathematical Science.
Benjamin Parks, first in Engineering, obtained £20 per year for two years.

5. Competitive Examinations and Civil Service Appointments.

At the Examinations held in 1868, the following Students of Queen's College, Cork, obtained appointments in the public service by Competitive Examination:—

R. C. Bourke, Public Works Service, India.
Richard Unkles, do. do.
Henry Richards, do. do.
George J. Bourke, do. do.
Philip James Large, do. do.
Simon Exham, Royal Engineers, Woolwich.
James Chatterton, B.A., M.D., Army Medical Service. He obtained first place at first examination, and also at final examination at Nettley.
Richard A. Mowle, Naval Medical Service.
John D. Isaac, do. do.
Mr. Henry F. Cox obtained by competitive examination an appointment in the service of the Peninsular and Oriental Steam Packet Company.

6. Library and Museums.

The special Report of the Librarian will be found in Appendix H; and the condition and progress of the several parts of the Museum will be found described in the Reports of the Professors to whose departments they belong (Appendix F). In reference to the Botanic Garden, I beg leave to represent the necessity for having provided a Greenhouse or Conservatory for the preservation of such tropical or subtropical plants as are requisite for the proper illustration of the Botanical Lectures of the Professor of Natural History.

7. Financial Position of the College.

The annexed copies of the accounts furnished by the Bursar forming Appendix I, will show the financial position of the College for the year from 31st March, 1868, to 31st March, 1869.

8. Conduct and Discipline of the Students.

I have to report that the discipline of the College was very good during the greater part of the session of 1867–68, but towards its close several cases of grave violation of discipline occurred, which were promptly and energetically dealt with by the College council. The special Report of the Vice-President on discipline, and the official return of punishments by the Registrar are annexed, forming Appendix K, Nos. 1 and 2.

During the session 1868–69, from opening in October, 1868, to date of this Report, 31st March, 1869, the state of discipline has been excellent, no case requiring the notice of the College council having occurred.

With respect to the proportions of the several religious denomi-

nations among the students, the following table gives the numbers for the last and the current session.

Religious Denominations.	1867–68.			1868–69.		
	Matriculated.	Non-Matriculated.	Total.	Matriculated.	Non-Matriculated.	Total.
Roman Catholic,	107	4	111	89	8	97
Anglican,	110	8	118	107	18	125
Presbyterian,	7	–	7	11	1	12
Wesleyan,	8	–	8	6	1	7
Other Denominations,	3	–	3	3	–	3
Total,	235	12	247	216	28	244

The following table shows the religious denominations of the Students who entered the College in October, 1868, as Matriculated Students for the first time :—

Roman Catholics,	22
Anglicans,	32
Presbyterians,	4
Wesleyans,	1
Total,	59

The Reports of the Deans of Residences referring to the moral and religious conduct of the Students will be found in Appendix K, Nos. 3 and 4.

ROBERT KANE, LL.D., F.R.S.,

President of Queen's College, Cork.

26*th May*, 1869.

APPENDIX.

APPENDIX A.

Appendix A.

General Regulations of College, &c.

GENERAL REGULATIONS of the COLLEGE.—LIST of OFFICERS.—PROGRAMME of COURSES for MATRICULATION and SCHOLARSHIP.—HOURS of LECTURES.—SPECIAL COURSES for COMPETITIVE EXAMINATIONS and for the PUBLIC SERVICE.—QUEEN'S UNIVERSITY EXAMINATIONS, &c.

QUEEN'S UNIVERSITY IN IRELAND—QUEEN'S COLLEGE, CORK.

Faculties of Arts, Medicine, and Law.—Session 1869–70.

President—SIR ROBERT KANE, F.R.S., M.R.I.A.

Vice-President—JOHN RYALL, LL.D.

Professors.

The Greek Language,	JOHN RYALL, LL.D.
The Latin Language,	BUNNELL LEWIS, M.A., F.S.A.
Mathematics,	CHARLES NIVEN, B.A.
Natural Philosophy,	JOHN ENGLAND, M.A.
History and English Literature,	WILLIAM RUSHTON, M.A.
Logic and Metaphysics,	GEORGE SIDNEY READ, M.A.
Chemistry,	JOHN BLYTH, M.D.
Natural History,	JOSEPH REAY GREENE, B.A., M.D.
Geology and Mineralogy,	ROBERT HARKNESS, F.R.S.S.L. & F., F.G.S.
Modern Languages,	RAYMOND DE VERICOUR, M.A.
Jurisprudence and Political Economy,	RICHARD HORNER MILLS, M.A.
English Law,	MICHAEL BARRY, M.R.I.A.
Anatomy and Physiology,	J. HENRY CORBETT, M.D., L.R.C.S.I.
Medicine,	DENIS C. O'CONNOR, B.A., M.D.
Surgery,	WILLIAM K. TANNER, M.D., F. & L.R.C.S.I.
Materia Medica,	PURCELL O'LEARY, B. es L., M.A., M.D., F.B.S.
Midwifery,	JOSHUA R. HARVEY, B.A., M.D.
Engineering,	ALEXANDER JACK, M.A.
Celtic Languages,	OWEN CONNELLAN, Esq.

Officers.

Registrar,	ROBERT JOHN KENNY, Esq.
Bursar,	EDWARD M. FITZGERALD, Esq.
Librarian,	MATTHIAS O'KEEFFE, M.A., M.D.

The College Session, 1869–70.

The *First Term* will commence on the 19th of October, 1869, and end on the 18th of December.

The *Second Term* will commence on the 3rd of January, 1870, and end on the 9th of April.

The *Third Term* will commence on the 25th of April, 1870, and end with the Session, on the 11th of June.

Appendix A.

General Regulations of College, &c.

Subjects of the Matriculation Examinations.

For the Faculties of Arts, Medicine, and Law.

Greek:

Grammar.

Any one of the following Authors which the Candidate may select:—

Homer—Iliad, Books I. and II.
Xenophon—Anabasis, Books I. and II.
Lucian—Walker's Selections.

Latin:

Any one of the following Authors which the Candidate may select:—

Virgil—Æneid, Books I. and II.
Sallust—Conspiracy of Catiline.
Cæsar—Gallic War, Book I.

English:

Grammar—

(1.) The principles of Etymology and Orthography.
(2.) The leading Rules of Syntax.

Composition, and writing from dictation.

Outlines of Grecian History to the death of Alexander the Great.
Outlines of Roman History to the accession of Augustus.
Outlines of Ancient and Modern Geography.

Mathematics:

Arithmetic—Principles of Notation. Vulgar and Decimal Fractions. Definition of the terms, Ratio and Proportion. The Rule of Proportion, with its commercial applications, including Simple Interest.
Algebra—Explanation of the signs and meaning of an Index. Calculation of the values of Algebraical Expressions, when particular values are given to the letters which they involve.
Euclid—Book I., with the definitions and axioms.

N.B.—The Easter Recess for the Medical Faculty will commence on the Tuesday before Easter, and end on Easter Monday.

For the Department of Civil Engineering.

The outlines of Modern Geography; Grammar.

Mathematics—Arithmetic, Principles of Notation, Vulgar and Decimal Fractions, with the reasons of the different rules. Rule of Proportion, with its commercial applications; Extraction of the Square Root, both of whole numbers and decimals.
Algebra—Explanation of the signs and meaning of an Index, calculation of the value of Algebraic expressions, when particular values are given to the letters which they involve.
Euclid—Books I., II., III., IV., and VI., with the definitions of Book V.

Matriculated Students.

Persons intending to become *Matriculated* Students of the College, in any of the Faculties or Departments of Faculty, are required to pass the Matriculation Examination, whereby they are declared competent to pursue the course of study prescribed to Students in that Faculty or Department of Faculty, and, on completing this course, are entitled to become Candidates for the Degrees or Diplomas granted by the Queen's University in Ireland.

The Examination for the Matriculation *of Students in the several Faculties and Departments of Faculty, will commence at Ten o'clock, on Tuesday, the 19th of October*, 1869.

Candidates for Matriculation are required to forward their names to the Registrar of the College, and to state the Faculty or Department of Faculty for which

they propose to matriculate, at least *three days* before the commencement of Matriculation Examinations.

Each Candidate, before being admitted to the Matriculation Examination, is required to pay the Bursar of the College the *College Fees* for the year, amounting to 10*s.* for each Faculty or Department of Faculty. These fees will be returned to such Candidates as may fail in passing the Matriculation Examination.

After passing the Matriculation Examination, and before receiving a Certificate thereof, or joining the several Classes, each Student is required to pay the Bursar of the College the whole of the *Class Fees* for the Session.

The Lectures in Arts and Engineering commence October 25th, and those in Medicine, November 2nd.

One moiety of the *Class Fees* for the Session is returned to Junior Scholars; but this exemption is not to extend to the Fees of any Honor Lectures attended by them out of the order of studies laid down in the Curriculum.

In order to encourage the study of French by Candidates for Matriculation, a prize of £5 will be offered for competition in that language, to such Students as, at the opening of Session 1869–70, shall have passed the Matriculation Examination for the first time.

Matriculated Students are required to wear an academic dress.

In May and June are held General Examinations in the subjects lectured upon during the Session; and a sum of One Hundred Pounds is awarded in Prizes to the most distinguished Students.

Students who have pursued part of their studies in any one of the Queen's Colleges, or in any University capable of granting Degrees in the several Faculties of Arts, Law, and Medicine, are permitted, on passing the prescribed Examinations, and producing testimonials of their College standing and conduct, to take corresponding rank in this College, and also to compete for Scholarships of the corresponding year; providing they shall not hold at the same time a Scholarship or other office of emolument in any University or College of a University.

University Prizes.

Two Prizes for English Prose Composition, and two for Geometry, have been founded in each of the Queen's Colleges, to be awarded annually at entrance—First Prize for English Prose Composition, £3 worth of Books; Second ditto, £2 worth of Books. First Prize for Geometry,* £3 worth of Books; Second ditto, £2 worth of Books.

Non-Matriculated Students.

Gentlemen who do not propose, or are not prepared, to matriculate, but who wish to avail themselves, in other respects, of the advantages offered by the College, are permitted to attend the Professors' Lectures, without passing any of the Examinations, on paying to the Bursar the regulated Class Fees, amounting generally to £2 for each course, and College Fee of 5*s.* for the Session; but they cannot become Candidates for Scholarships or Prizes, or enjoy the other privileges of Matriculated Students. They are, however, entitled to the use of the Library, on subscribing the Library Regulations, and paying a fee of 15*s.* for each Session; and the Professors are authorized to recommend to the Council to grant Certificates of Honor to the most distinguished of them in their respective Classes.

East India Civil Service.

The attention of parents and guardians is directed to the new arrangements for the East India Civil Service; according to which Writerships are open to competition at Examinations prescribed by the Board of Control. The course of Lectures in the Queen's College, Cork, are well adapted to prepare Candidates for this Examination, which includes the following branches of knowledge, their relative importance being indicated by the annexed scale of marks.

* 1st, 2nd, 3rd, 4th, and 6th Books of Euclid, with Deductions, together with the Definitions of the 5th Book.

Appendix A. General Regulations of College, &c.

English Language and Literature:

Composition,	50
English Literature and History, including that of the Laws and Constitution,	1,000
	1,500
Language, Literature, and History of Greece,	750
" " " Rome,	750
" " " France,	375
" " " Germany,	375
" " " Italy,	375
Mathematics, pure and mixed,	1,250
Natural Sciences—that is, Chemistry, Electricity, and Magnetism, Natural History, Geology, and Mineralogy,	500
*** No candidate will be allowed to be examined in more than three of the branches of knowledge included under this head, and the total (500) may be obtained by adequate proficiency in any three.	
Moral Science—that is, Logic, Mental and Moral Philosophy,	500
Sanscrit Language and Literature,	375
Arabic Language and Literature,	375
	7,125

Library and Museum.

The Library and Museum are open, under certain regulations, to all the Students.

Faculty of Arts.

Lectures.

The Lectures of the several Professors in this Faculty will commence on Monday, the 25th of October, 1869, except those on the "English Language" and on "Logic," which will not be delivered until the commencement of the Second Term.

Scholarships.

The Examinations for Scholarships will commence on Thursday, the 21st of October.* The College Council are empowered to confer, at these Examinations, Eight Senior Scholarships of the value of £40 each, and Forty-six Junior Scholarships, viz.:—Fifteen in Literature, and Fifteen in Science, of the value of £24 each; Eight in Medicine, value £25 each; Three in Law, and Five in Civil Engineering, of the value of £20 each—and if competent Candidates present themselves, these Scholarships will be awarded to the most deserving. The Scholarships are tenable for one year only, except the Second Year's Scholarships in Arts, which are tenable for two years, on condition that the Scholar shall pass with Honors the "First University Examination," and shall attend, during the third Session, at least two of the Courses of Lectures prescribed by the University for attendance during that Session, as a qualification for the Degree of B.A., and shall pass the Sessional Examinations in these subjects; but the Scholars of each year are, at its expiration, eligible to become Candidates for the Scholarships of the succeeding year. A Scholarship, however, of the same year in the same Faculty, cannot be held twice by the same Student.

The Scholarships of the first year are open to all Students of the respective Faculties who have passed the Matriculation Examination. Those of the second and fourth years in Arts and those of second, third, and fourth years in Medi-

* See Programme of Scholarship Examinations, page 16.

cine and Law, and of the second and third in Engineering, are open to all Students who have passed the Examinations, and attended the Lectures prescribed in the preceding part of their Course of Study.

If any Student be placed, at the Examination for Junior Literary and Science Scholarships, first on both the lists of Candidates, he will be entitled to a Scholarship of each Division; but in no other case will the same Student be permitted to hold two Scholarships.

No Student is entitled to become a Candidate for a Scholarship, or Exhibition, unless he shall have paid, on or before the day previous to the Examination, the College and Class *Fees for the current Session, and procured a Certificate to that effect from the Bursar.**

The Scholarship and Exhibition endowments are paid by Quarterly Instalments, and their tenure is dependent on the performance (so far as required by the Council) of the duties prescribed by the Statutes. These duties are, to take charge of the Class-Rolls, to Register the attendance of the Students, to assist the Professors, &c.

If the Scholar or Exhibitioner be not obedient to the orders of the Council, be removed from the College, or, by non-attendance on Lectures, fail to keep the terms required for promotion, he forfeits his Scholarship or Exhibition.

The Scholar in the Faculty of Medicine must attend, during the year of his appointment, the classes recommended for his year of study in the order of the following Curriculum:—

FIRST YEAR.	THIRD YEAR.
Anatomy and Physiology.	Surgery.
Chemistry.	Midwifery.
French or German.	Practical Anatomy.
Natural Philosophy.	
Zoology and Botany.	
SECOND YEAR.	**FOURTH YEAR.**
Anatomy and Physiology.	Practice of Medicine.
Materia Medica.	Medical Jurisprudence.
Practical Anatomy.	
Practical Chemistry.	

Junior Scholarships.

Subjects of Examination for Literary Scholarships of the First Year.

The Greek Language:

Homer—The Iliad, Books I., II., III., IV., V., and VI.
Euripides—Phœnissæ.
Herodotus—The Second Book.
Xenophon—The Anabasis, Books I., II., III.
Lucian—Walker's Selections.
Greek Prose—Re-translation of short sentences from English into Greek.

The Latin Language:

Virgil—First six Books of the Æneid, the Georgics.
Horace—First two Books of the Odes, the Satires, and the Epistles, Books I., II.
Cicero—De Senectute, De Amicitiâ.
Sallust—Conspiracy of Catiline, and Jugurthine War.
Cæsar—The Gallic War, Books V., VI.
Latin Prose—Re-translations from English into Latin, of portions of Cicero.

N.B.—The Examination in Greek and Latin will be conducted partly *vivâ voce*, and partly by printed questions.

The English Language:

Original Essays on subjects proposed by the Examiner. The Principles of English Grammar. The Laws of Etymology and Orthography. Craik's Outlines of the History of the English Language.

History and Geography:

Grecian History to the Death of Alexander the Great.
Roman History to the Accession of Augustus.
Outlines of Ancient and Modern Geography.

* This rule applies only to such candidates as have previously attended any course of instruction in any University capable of granting Degrees.

Appendix A.

General Regulations of College, &c.

Subjects of Examination for Literary Scholarships of the Second and Third Years.

The Greek Language:

Homer—Iliad, Books XI. to XIV. inclusive.
Sophocles—Œdipus Coloneus.
Thucydides—Book I., Chapters 1 to 60 inclusive.
Prose composition.

The Latin Language:

Virgil—Eclogues and Æneid.
Horace.
Terence—Heauton Timorumenos.
Cicero—Tusculan Disputations.
,, De Oratore.
Juvenal—Satires, I., III., VIII., X. XIII., XIV.
Livy—Book IV.
Tacitus—Histories, Book I.

Composition in prose and verse.

The English Language:

Craik's Outlines of the History of the English Language.
History of English Literature. Text-book, Chambers' Cyclopædia of English Literature, Vol. I., pp. 85–145.
Shakespeare's Julius Cæsar.
,, King John.

The French Language:

Molière—L'Avare; Le Misanthrope.
Lafontaine—Fables.
Histoire de la Littérature Française, par Demogeot.
Translation from English into French.

Subjects of Examination for Science Scholarships of the First Year.

Arithmetic:
Mensuration of rectilineal figures and of the circle.

Algebra:
The Solution of Simple and Quadratic Equations with one or more unknown quantities. Easy questions in the application of Algebra to Geometry. Arithmetical and Geometrical Progressions. The nature of Logarithms.

Euclid:
Books I., II., III., and IV., with deductions.

Trigonometry:
Definitions of the Sine, Tangent, &c., of an angle. The easier analytical formulæ. The Solution of Plane Triangles, with demonstrations. Nature and Use of the Tables.

Subjects of Examination for Science Scholarships of the Second and Third Years.

The Higher Arithmetic, with Mensuration:
Algebra:
The Solution of Equations with one or more unknown quantities. Elimination. Theory and use of Logarithms. Theory of Equations. Binomial and Exponential Theorems. Compound Interest and Annuities.

Geometry:
Euclid, Books I., II., III., IV., VI., with deductions. Analytical Geometry.

Trigonometry:
The Solution of Plane Triangles, with demonstrations of the formulæ. Theorems relating to single arcs. Theorems relating to the sums and differences of arcs. Application to heights and distances.

Subjects of Examination for Engineering Scholarships of the First Year.

Arithmetic:
Mensuration:
Algebra:
Euclid:
Trigonometry:
} As for Science Scholarships of the First Year.

Subjects of Examination for Engineering Scholarships of the Second Year.

Mathematics:

The same as for Science Scholarships of the Second Year, except that Spherical Trigonometry will be substituted for Analytical Geometry.

French:

Demogeot—Histoire de la Littérature Française.
Translation from English into French.

Chemistry:

Laws of Combination and Affinity—Preparation and Properties of the Chief Organic Substances—Metallurgic Operations—Mortars and Cements.

Geometrical Drawing:

Descriptive Geometry—Orthographic Projection—Isometric Projection—Perspective—Geometry of Oblique Bridge.

Subjects of Examination for Engineering Scholarship of the Third Year.

Mathematics:

Algebra—Theory of Equations and Methods of Approximation. Elimination. Summation of Series. Binomial and Exponential Theorems. Scales of Notation, &c.

Trigonometry—Plane and Spherical, with Astronomical applications.

Analytical Geometry, and Geometrical Conic Sections.

Differential Calculus—involving demonstrations of the rules for differentiating Algebraic, Circular, and Exponential Functions, founded upon a clear statement of the nature of Limits and Definition of a Differential coefficient. Taylor's and Maclaurin's Theorems. Maxima and Minima. Criteria of the same, with proofs, Equation of Tangent, Normal, Evolute, &c.

Integral Calculus, including more particularly Rational Fractions, Binomial Differentials, Areas of Curves, Rectification of Curves, Cubature of Solids of Revolution.

Natural Philosophy:

Newth's Mechanics.
Ganôt—Traite de Physique—Books VI., VII., VIII., IX.

Geology and Mineralogy:

Civil Engineering:

Instruments used by the Civil Engineer. Their Adjustments and use. Surveying. Levelling.

Senior Scholarships.

Seven Senior Scholarships are appropriated to the Faculty of Arts, for proficiency in Special Departments of Study, and will be conferred, by examination, on the most deserving of the Graduates of the Queen's University, in the Faculty of Arts, of less than two years' standing.

One in Ancient Languages, Literature, and History of Ancient Greece and Rome.

One to Modern Languages, Literature, and History, viz., English Language, Literature, and Composition; European and English History; the French Language, with German or Italian.

One to Mental and Social Science, viz., Logic, Metaphysics, and Political Economy.

One to Mathematics, viz., Pure Mathematics.

One to Natural Philosophy, viz, Experimental Physics, and Mixed Mathematics.

One to Chemistry, viz., Theoretical and Practical Chemistry.

One to Natural History, viz., Zoology and Botany, Geology, and Physical Geography.

*** For Senior Scholarship in Law, see page 26.

Appendix A.

General Regulations of College, &c.

SUBJECTS OF EXAMINATION

For the Senior Scholarships in the Greek and Latin Languages, and Ancient History.

The Greek Language:

Æschines—Contra Ctesiphontem.
Together with the subjects for the B.A. Honor Examination at the University.
Composition in Attic Prose and Iambic Verse.
Greek Literature and History.

The Latin Language:

Virgil.
Horace.
Lucretius, Books I., II.
Ovid—Fasti, Book I.
Persius.
Terence—Andria and Heauton Timorumenos.
Plautus—Capteivei and Pseudolus.
Cicero—De Oratore.
,, Tusculan Disputations.
,, Ad Atticum, Books I., II.
,, Actiones Verrinæ.
Livy—Books IV. and XXII.
Tacitus—The Annals, Books I. to IV., inclusive.

Composition in Prose and Verse.

For Senior Scholarships in Modern Languages and History.

The French Language:

Lavallée—Histoire des Français.
Histoire de la Littérature Française, par Demogeot ou Nisard.

The German Language:

National-Literatur, von A. F. Vilmar.
Schiller's Maria Stuart.
Goethe's Ephigenie.

Translation from English into one of the above Languages.

English:

Language, Literature, and Composition.
History—Hallam's Middle Ages.
Chap. II., Part 1, The Feudal System.
Chap. VIII., Part 1, The Anglo-Saxon Constitution.
Chap. VIII., Part 2, The Anglo-Norman Constitution.
Chap. VIII., Part 3, The English Constitution.

The Italian Language:

Tasso—Gerusalemme Liberata—first five Cantos.
Dante's Inferno—Italian Literature, published by Messrs. Chambers.
Translation from English into French, German, or Italian.

For the Senior Scholarship in Mathematics.

The subjects of previous Examinations (for which see page 14), with the following additions:—

Analytical Geometry of Three Dimensions.
Differential Equations.

For the Senior Scholarship in Natural Philosophy.

Duhamel—Mécanique.
Brinkley—Elements of Astronomy, including the Appendix.
Parkinson's Optics.

For the Senior Scholarship in Mental and Social Sciences.

The subjects discussed in the Lectures of the Professors, with the following additions:—

Metaphysics and Logic:

Sir William Hamilton's Philosophical Essays and Notes on Reid.
Mill—System of Logic, Book III. to the end of Volume I.

Political Economy:

Principles of Political Economy, by John Stuart Mill.
Taxation and Funding, by M'Culloch—third edition, 1863.

The value attached to the subjects will be in the following proportions, viz.:—

Metaphysics and Logic,	60
Political Economy,	40

For the Senior Scholarship in Chemistry.

Chemical Physics (in Miller's Chemistry).

Inorganic Chemistry:

General principles of Chemical Philosophy. Crystallography. Chemistry of the Metals. Constitution of Salts. Metallurgy.

Organic Chemistry:

Ultimate analysis of Organic Bodies. Empirical and Rational formulæ. Determination of the density of Vapours. Law of Substitution. Homologous Series. Chemical Types. Gerhardt's Views. Preparation and Properties of the Alcohol Series and their Derivatives. Cyanogen, its Compounds and Derivatives. Organic Bases of Artificial Origin.

Practical Chemistry:

The Analysis of Mixtures, containing two or more Acids and Bases.

For the Senior Scholarship in Natural Science.

The Lectures of the Professors.
Huxley—Elements of Comparative Anatomy.
Mill's Logic, Book IV.
Lyell's Elements and Principles.

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1. Course for the Degree of Bachelor in Arts.*

Candidates for the Degree of Bachelor in Arts are required—

1. To have been admitted Matriculated Students of the Queen's University in the Faculty of Arts.
2. To have subsequently studied in one of the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Degree of Bachelor in Arts shall extend over three Sessions, and shall comprise attendance on the following curriculum:—

FIRST SESSION.

English (One Term).
Greek.
Latin.
A Modern Continental Language.
Mathematics (First Course).

SECOND SESSION.

Logic (One Term).
Natural Philosophy.

Along with any two of the following:—

Greek (Second Course).
Latin (Second Course).
Modern Continental Languages (Second Course).
Mathematics (Second Course).

THIRD SESSION.

English Language and Literature.
Metaphysics, or History, or Political Economy (Two Terms).
Chemistry.
Zoology, or Botany.

Attendance on these Courses shall, in all cases, be understood to include passing such examinations as may be appointed by the College Council, and the catechetical parts of the Courses of Lectures.

Candidates for the Degree of Bachelor in Arts shall reside at their respective Colleges during at least the first two terms of each Session, but may be exempted from residence during the third term by a special grace of the College Council.

Third year's Students may substitute attendance on one or on two Courses of Honor Lectures, for a like number of the Courses above set down for study in the third Session.

* His Royal Highness the Commander-in-Chief has approved of Graduates of the Queen's University being in future exempted from the usual Examination for direct Commissions; and also of the First University Examination being accepted in lieu of that for the Royal Military College, Sandhurst.

Appendix A.

General Regulations of College, &c.

Candidates for the Degree of Bachelor in Arts shall pass two University Examinations—a Preliminary and a Degree Examination.

The Course for the Preliminary Examination shall include Greek, Latin, a Modern Continental Language, and Mathematical Science. Students who have completed their second Session must pass this Examination before rising to the third year, unless prevented by illness or other inevitable accident, in which case the Senate may admit them to a Supplementary Examination.

Candidates who have completed the Undergraduate Course, may offer themselves at the Degree Examination for graduation either with Honors or without Honors.

If they seek to graduate with Honors, they may select for their Examination any one of the following groups:—

Greek and Latin.
Modern Continental Languages.
Mathematical Science.
Experimental Science.
Natural Science.

Or any three of the following:—

English Language and Literature.
Metaphysics.
History.
Political Economy.
Logic.

Candidates who seek the Degree without Honors, may select for their Examination any group of the subjects from the following list, provided the sum of the numbers attached in this list to the selected subjects be at least four:—

English Language and Literature,	2	Latin,	1
Mathematical Science,	2	Each Modern Continental Language,	1
Experimental Physics,	2	Logic,	1
Chemistry,	2	Metaphysics,	1
Zoology,	1	History,	1
Botany,	1	Political Economy,	1
Greek,	1		

English Composition will form a part of all University Examinations.

2. Course for the Degree of Master in Arts.

Bachelors in Arts of one year's standing, may offer themselves for Examination for the Degree of Master in Arts, and may select for their Examination any one of the following groups:—

Greek and Latin.
Modern Continental Languages.
Mathematical Science.
Experimental Science.
Natural Science.

Or any three of the following:—

English Language and Literature.
Metaphysics.
History.
Political Economy.
Logic.

This Ordinance supersedes former Ordinances prescribing the curriculum for the Degree of Master in Arts.

3. Course for the Diploma of Licentiate in Arts.

A Diploma conferring the title of Licentiate in Arts of the Queen's University in Ireland, shall be granted to Candidates who comply with the following regulations:—

Candidates for this Diploma are required—

1. To have matriculated in the Queen's University.
2. To have pursued in one of the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examination herein prescribed.

The Course for the Diploma of Licentiate in Arts shall extend over two Sessions, and shall comprise attendance on the following curriculum:—

FIRST SESSION.

Two Languages, of which one may be English.
Mathematics.
Another Course on any subject in the annexed list.

SECOND SESSION.

Greek, Latin, or a Modern Continental Language.
Logic (One Term).
Natural Philosophy.
And two other Courses on subjects in the annexed list.

If any of the Courses, except that on Logic, extend over one Term only, some other Course from the annexed list must be attended as a supplement to it, but not necessarily in the same Session.

Credit will not be given for attending the same Course of Lectures a second time.

Attendance on the Courses shall, in all cases, be understood to include passing such Examinations as the College Council shall appoint, and the catechetical parts of the Courses of Lectures.

Candidates for the Diploma of Licentiate in Arts shall reside at their respective Colleges during at least the first two terms of each Session.

After having completed the above curriculum, Candidates for the Diploma shall pass a University Examination in Greek, Latin, or a Modern Continental Language; in Mathematical Science; and in two other subjects selected from the annexed list, viz.:—

The Mathematical Sciences.
The Experimental Sciences.
The Natural Sciences.
Geometrical Drawing.
Mensuration, Levelling, and Mapping.
Anatomy and Physiology.
English Language and Literature.
The Modern Continental Languages.
Greek.
Latin.
Logic.
Metaphysics.
History.
Political Economy.

English Composition will form a part of all University Examinations.

Licentiates in Arts who may desire to proceed to the Degree of Bachelor in Arts, may enter directly on the second Session in the Course for this Degree, provided they attend in it, instead of the usual curriculum, all the Courses prescribed for the first two years which they shall not have already attended in the curriculum for the Diploma of Licentiate.*

University Prizes.

University Exhibitions in the Faculty of Arts.

Three Exhibitions of £20 a year for three years, three Exhibitions of £15 a year for three years, and two Exhibitions of £10 a year for three years, will be competed for annually in the Faculty of Arts. The three £20 Exhibitions will be awarded to the Candidates who stand foremost in order of merit from each College, at the first University Examination in Arts; and the three £15 Exhibitions to the Candidates who stand second in order of merit from each College: provided that their names appear in the First Class of the Division List at that Examination. Of the two £10 Exhibitions, one will be awarded to the best answerer in Mathematical Science, and the other to the best answerer

* Note.—Degrees in Arts, conferred by the Queen's University in Ireland, are recognised by the University of Durham, by St. Bee's College, Whitehaven, and by St. Aidan's College, Birkenhead, in the case of Theological Students preparing for Holy Orders in the Established Church.

Appendix A.

General Regulations of College, &c.

in the Ancient Classics, at the first University Examination. The £10 Exhibitions are open to the competition of Candidates from all the Colleges, and may be held along with one of the larger Exhibitions.

Each Candidate will be deemed a Student of that College in which he shall have attended the Lectures of the second Session; and no Student will be admitted to the competition who shall have allowed more than one academic year to intervene between the time that he entered upon the studies of the second Session and the time of competition.

The first instalment of each Exhibition will be paid at the time of competition; the second when the Exhibitioner takes the Degree of B.A. in the Queen's University, provided he graduate with honors, and within two academic years; and the third when he takes the Degree of M.A. in the Queen's University, provided he obtain it within three academic years from the time of competition.

University Prizes in Composition, open to the Competition of Graduates and Undergraduates.

Two Prizes for English Prose Composition, one of £10 worth of Books, and the other of £5 worth of Books, have been founded, and are open to the competition of all members of the University who shall not have been graduates for more than three years at the time of competition, and who shall not have already twice obtained one or other of these Prizes.

University Prizes in Composition, open to the Competition of all Undergraduates.

Two Prizes in Composition, one for English Prose, the other for Greek or Latin Prose, and each consisting of £5 worth of Books, have been founded, and are open to the competition of all undergraduates, provided that neither the English nor the Classical Prize be awarded oftener than twice to any Student.

Diploma in Engineering.

Each Candidate for the Diploma in Civil Engineering is required—

1. To have been admitted a Matriculated Student of the Queen's University in the Department of Civil Engineering.
2. To have studied in the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Diploma in Civil Engineering shall usually extend over Three Sessions, and shall comprise attendance on the following curriculum:—

FIRST SESSION.

Mathematics (First Course).
Chemistry.
Modern Languages.
Geometrical Drawing.
Office Work.
Mineralogy, Geology, and Physical Geography.

SECOND SESSION.

Mathematics (Second Course).
Experimental Physics.
Civil Engineering.
Office Work.
Field Work.

THIRD SESSION.

Natural Philosophy, applied.
Mathematical Physics.
Civil and Mechanical Engineering.
Office Work.
Field Work.
Engineering Excursions.

Attendance on these Courses shall in all cases be understood to include passing such Examinations as may be appointed by the College Council, as well as the catechetical parts of the Courses of the Lecture.

Engineering Students shall reside at their respective Colleges during at least the first two Terms of each Session, and can be exempted from residence during the third Term also, only by a special grace of the College Council.

The study of the Engineering Curriculum may be extended over more than three Sessions, on the recommendation of the College Council, and under such regulations as the Council shall impose. Some relaxation of the order in which the subjects shall be studied will also be admitted, on the recommendation of the Council.

Candidates will, on the special recommendation of the College Council, be admitted to the Diploma after two years' residence instead of three, if their previous acquaintance with a sufficient group of the subjects above set down for study in the First and Second Session is deemed by the Council satisfactory. In such cases the Certificate of the Council will be accepted in lieu of attendances upon these Courses, but will not exempt Candidates from the University Examinations in them.

In order to obtain this Certificate, Students must have attended previously at least one Session in Arts, or one year in an Engineer's office. On making application to the Council, such Students will be allowed to present themselves, at the time of Matriculation, for examination in the subjects of any four of the eight Courses of Lectures of the first two years. On passing this Examination, they will be allowed to take rank at once as Students of the second year, and will then be required to attend those other four Courses of Lectures only, in the subjects of which they have not passed; but they will not be eligible for the Scholarship of that year.

The application to be admitted to this Examination must be lodged with the Registrar before the first day of the Session, and must state what are the four subjects in which the Students propose to offer themselves for Examination, and must be accompanied by a Certificate of the required attendance of one or more years in Arts or an Engineer's Office.

On passing the Sessional Examinations in the subjects of these four Courses of Lectures which they shall have attended as Students of the second year, they will be promoted to the rank of Students of the third year; and, on completing the regular Course of that year, will be furnished with the Certificate required by the Senate of the University.

The University Examinations shall extend to all the subjects of the above Curriculum. French will, in all cases, be required.

Candidates must present themselves before the close of their Collegiate Course for Examination in the following subjects, viz.:—Mathematics (*First Course*); Experimental Physics; Modern Languages; Geometrical Drawing (including Orthographic projection, Isometric projection, Descriptive Geometry, and Linear Perspective); Mathematics (*Second Course*); Mensuration, Levelling, and Mapping.

The final Examination shall extend to all the subjects of the Engineering Course, in which the Candidate shall not have previously passed. English Composition will form a part of each University Examination.

This Ordinance shall take effect from the first day of January, 1860; Students who shall have entered the Engineering Schools of the Colleges of Queen's University previously, may proceed either under the present Ordinance, or under that hitherto in force.

Exhibitions in the School of Engineering.

Two Exhibitions, one of £20 a year for two years, and the other of £15 a year for two years, will be competed for annually in the School of Engineering. These Exhibitions will be awarded at the first University Examination in Engineering: the £20 Exhibition to the best answerer absolutely, in whichever of the Colleges he may have been educated, and the £15 Exhibition to the Candidate who is first in order of merit of the competitors from the other two Colleges: provided that their names appear in the First Class of the Division List at that Examination.

Each Candidate will be deemed a Student of that College in which he shall have attended the Lectures of the second Session; and no Student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

Appendix A.

General Regulations of College, &c.

The first instalment of each Exhibition will be paid at the time of competition; the other when the Exhibitioner takes the Diploma in Engineering of the Queen's University, provided that he take honors with it, and obtain it within two academic years from the time of competition.

Faculty of Medicine.

Lectures, &c.

The Medical Session will be opened on Tuesday, 2nd of November, 1869, and the Courses of Lectures will commence as under:—

Anatomy and Physiology—Tuesday, 2nd November, at One o'clock, to be continued daily, except on Saturdays, at the same hour.

Practice of Medicine—Wednesday, 3rd November, at Three o'clock, to be continued on Mondays, Wednesdays, and Fridays, at the same hour.

Practice of Surgery—Tuesday, 2nd November, at Four o'clock, to be continued on Tuesdays and Thursdays, at Four o'clock, and Saturdays, at One o'clock.

Materia Medica—Tuesday, 2nd November, at Three o'clock, to be continued on Tuesdays and Thursdays, at Three o'clock; and on Saturdays, at Twelve o'clock.

Medical Jurisprudence—Tuesday, 2nd November, at Twelve o'clock, to be continued on Tuesdays and Thursdays, at the same hour, and on Fridays at One o'clock.

Midwifery—Wednesday, 3rd November, at Four o'clock, to be continued on Mondays, Wednesdays, and Fridays, at the same hour.

The Course of Practical Anatomy will be conducted by the Professor of Anatomy and Physiology, assisted by Dr. Shinkwin and Dr. H. M. Jones, Demonstrators.

The Anatomical Demonstrations will commence on 3rd of November, and be continued daily at Twelve o'clock, except Saturdays.

Chemistry—Monday, Wednesday, and Friday, at Two o'clock.

Practical Chemistry—Monday, Tuesday, Wednesday, Thursday, and Friday.

Zoology and Botany—Monday, Wednesday, and Friday.

Natural Philosophy—Tuesdays and Thursdays.

Modern Languages—Monday, Wednesday, and Friday.

Subjects of Examination for Medical Scholarships of the First Year.

The Scholarships of the First year in the Faculty of Medicine will be awarded thus:—One to the Candidate who shall have most distinguished himself at the Examination in the course prescribed for Science Scholarships of the First year in Arts, and one to the Candidate who shall have most distinguished himself at the Examination in the course prescribed for Literary Scholarships of the First year in Arts. Candidates for these Scholarships shall have previously declared themselves, and have matriculated as Medical Students. It is left to their option for which of them they will compete.

Subjects of Examination for Medical Scholarships of the Second Year.

Anatomy and Physiology.	General Physics.
Chemistry.	Zoology and Botany.

The French Language.

Subjects of Examination for Medical Scholarships of the Third Year.

Anatomy and Physiology.	Materia Medica.
Practical Anatomy.	Practical Chemistry.

Subjects of Examination for Medical Scholarships of the Fourth Year.

Anatomy and Physiology.	Pathology and Morbid Anatomy.
Practical Anatomy.	Surgery.
Therapeutics.	Midwifery.

Note.—The 17th of November will be the last day for entering for the Six Months' Courses of Lectures in the above Curriculum. All the Lectures are recognised by the Queen's University in Ireland, by the Universities of London, Glasgow, Aberdeen, and St. Andrew's; the Colleges of Surgeons of Dublin, Edinburgh, and London; by the Apothecaries' Companies, by the Army, Navy, and East India Medical Boards, &c., &c.

Degrees of M.D. and M.Ch.*

Each Candidate for the Degree of Doctor in Medicine or Master in Surgery is required—

1st.—To have passed in one of the Colleges of the Queen's University the Entrance Examination in Arts, and to have been admitted a Matriculated Student of the University.

2nd.—To have attended in one of the Queen's Colleges, Lectures on one Modern Continental Language for six months, and Lectures on Natural Philosophy for six months.

3rd.—To have also attended, in some one of the Queen's Colleges, at least two of the courses of Lectures marked with an asterisk. For the remainder of the courses, authenticated certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools, recognised by the Senate of the Queen's University in Ireland.

4th.—To pass two University Examinations—the First University Examination, and the Degree Examination.

The Curriculum shall extend over at least four years, and shall be divided into periods of at least two years each.

Candidates are recommended to pass the Matriculation Examination, prior to entering on the second period.

It is recommended that the first period shall comprise attendance on the following Courses of Medical Lectures:—

* Chemistry.
* Botany, with Herborizations for practical study, and Zoology.
* Anatomy and Physiology.
* Practical Anatomy.
* Materia Medica and Pharmacy.

And that the second period shall comprise attendance on the following Courses of Medical Lectures:—

Anatomy and Physiology (Second Course).
Practical Anatomy (Second Course).
* Theory and Practice of Surgery.
* Midwifery.
* Theory and Practice of Medicine.
* Medical Jurisprudence.

In addition to the above Courses of Lectures, Candidates shall have attended during either the first or second period—

A Modern Continental Language (in one of the Colleges of the University).
Experimental Physics (in one of the Colleges of the University).

Also, during the first period—

Practical Chemistry (in a recognised Laboratory).
Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered, at least Two each Week—a Winter Session of Six Months.

And during the second period—

Practical Midwifery, at a recognised Midwifery Hospital, with the Clinical Lectures therein delivered—for a period of Three Months, in an Hospital containing not less than Thirty beds; or six Months, in an Hospital containing not less than Fifteen beds.

Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered—Eighteen Months; including either three Winter Sessions of Six Months each, or two Winter Sessions of Six Months each, and two Summer Sessions of Three Months each.

Medical Examinations are held in June, and in September and October.

The June Examinations are Pass Examinations, and commence on the Tuesday following the Second Saturday in June.

* The regulations under which degrees in Surgery will be conferred on Candidates who graduated in Medicine before the year 1865, may be learned on application to the Secretary of the Queen's University.

Appendix A.

General Regulations of College, &c.

The Honor Examinations commence on the last Tuesday in September, and are followed by Pass Examinations.

Each Candidate for Examination in June must forward to the Secretary, on or before the first of June, notice of his intention to offer himself as a Candidate, along with his Certificates; and each Candidate for Examination in September or October must forward similar notice, along with his certificates.

Exhibitions in the Faculty of Medicine.

Two exhibitions, one consisting of two instalments of £20 each, and the other of two instalments of £15 each, will be competed for annually in the Faculty of Medicine. These exhibitions will be awarded for proficiency in the non-professional part of the first University Examination in Medicine: the £20 exhibition to the best answerer absolutely, in whichever of the Colleges he may have been educated; and the £15 exhibition to the candidate who is first in order of merit of the competitors from the other two colleges; provided that their names appear in the First Class of the Division List at that examination.

Each Candidate will be deemed a student of that College in which he shall have attended the Lectures of the second session; and no student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The exhibitions in Medicine will be paid in two equal instalments: one at the time of competition; the other when the exhibitioner takes the Degree of M.D. in the Queen's University, provided that he graduate with honors, and within three academic years from the time of competition.

Prize in Composition, limited to the Competition of Undergraduates in Medicine.

A prize of £5 worth of books has been founded, for a thesis on a subject to be prescribed, and is limited to the competition of the Undergraduates in Medicine who shall not have already twice received the prize.

The subjects on which the competitors for composition prizes are to write, will be announced on or before the first of June in each year; the compositions, with fictitious signatures, are to be sent in to the Secretary of the University, on or before the first of the following September, and the successful competitors will be declared at the next Public Meeting of the University.

Hospital Attendance.—Clinical Lectures on Medicine and Surgery are delivered at the North and South Infirmaries, by the Physicians and Surgeons of those Institutions.

	£	*s.*	*d.*
Fee for twelve months, ...	8	8	0
Fee for six months, ...	5	5	0
Practical Pharmacy at the same Infirmaries:			
Fee for three months, ...	3	3	0
Clinical Midwifery at the Lying-in Hospital, with Practical Attendance upon Thirty Midwifery cases:			
Fee for six months, ...	3	3	0

Further information may be had from the Medical Officers at the Infirmaries.

Faculty of Law.

Lectures.

The complete Course for each Class consists of Twenty-four Lectures, by the Professor of English Law, in each Collegiate Session; and of Twenty-four Lectures in each course of the first two years. The Lectures are delivered in the months of December, February, and March.*

* The following Rules were adopted by the Honorable Society of King's Inns, in Hilary Term, 1862, with reference to attendance on Lectures, as a condition precedent to being called to the Bar, viz.:—

V.—Every Student admitted into the Society after the first day of Trinity Term, One Thousand Eight Hundred and Fifty, if a Graduate of the University of

Law Scholarships.

Examination by the Professor of Jurisprudence.

First Year:

Reddie's Inquiries in the Science of Law.
Adam Smith's Wealth of Nations—Book III.
Hallam's Middle Ages—Chap. 8.

Examination by the Professor of English Law.

Williams—Principles of the Law of Real Property.

Second Year:—By Professor of Jurisprudence.

The Lectures of the Professor in the First Year (see note).
Sandar's Institutes of Justinian—Introduction.
The Chapters on Social Science in J. S. Mill's Logic—Book VI., Chap. 6, to end of the Book.

By Professor of English Law.

The Lectures of the Professor for the preceding years.
Smith—Manual of Equity Jurisprudence.
Williams—Principles of the Law of Personal Property.
Smith—On Contracts.

Third Year:—By Professor of Jurisprudence.

Ancient Law, by H. S. Maine (omitting latter part of chap. 9, from p. 340).
Sandar's Justinian, and the Lectures of the Professor, in the first and second years.

Dublin, Oxford, Cambridge, Durham, or London, or the Queen's University in Ireland, shall, as a condition precedent to being called to the Bar, produce Certificates of his having attended two complete Courses *at least* of Lectures, viz.:—one complete Course of Lectures of any two, at his option, of the four Law Professors—namely, the Law Professors of the University of Dublin, and those of the King's Inns, and *at least* five-sixths of the Lectures of each Session or University Term; or if a Graduate in Arts of the Queen's University in Ireland, shall have the option of producing Certificates of having attended two complete Courses, at least, of Lectures of each of the two Law Professors of any College of the Queen's University, comprising not less than thirty-six Lectures, and at least five-sixths of the Lectures of each Course, and of having passed the Examinations, in the College to which he belongs, on the subjects of the aforesaid two Courses of Lectures, provided that the curriculum prescribed by the said two Courses of Lectures shall embrace all that is contained in the Course now prescribed by the Professors of the King's Inns, or as the same may be from time to time varied by any rules of the Benchers.

VI.—Every Student admitted into the Society after the above date (if not a Graduate of one of the said Universities), shall, as a condition precedent to being called to the Bar, produce Certificates of his having attended four Courses of Lectures, viz.:—One Course of the Lectures of each of the said four Professors, and, *at least*, five-sixths of the Lectures of each Session, or University Term, in such manner, however, that every such Student shall be engaged not less than three years in the study of the Law in Ireland, exclusive of the two years necessary for keeping Terms in England; in every one of which three years, one complete Course of Lectures must be kept; any Student who shall produce Certificates of his having attended during three years the Courses of Lectures delivered by the Professors of English Law and of Jurisprudence, in one of the Colleges of the Queen's University, and of his having passed the General Examinations in such College on the subjects so Lectured on, shall be deemed entitled to such and the same privileges, in respect to his being called to the Bar, as if he had actually attended One Course of the Lectures of each of the two Law Professors of the University of Dublin, and had been engaged for two years in such attendance; but this rule and the preceding one are not intended to affect the number of Terms' Commons required by the present Rules of the Society, to be kept by Students of the King's Inns, prior to being called to the Bar.

VII.—If from illness, or other sufficient cause, any Student should be prevented from completing any Course of Lectures necessary towards being called to the Bar, the Legal Education Committee have power to direct what further attendance, if any, shall be sufficient in such case.—*Rules as to Legal Education, No.* 3.

Appendix A. — General Regulations of College, &c.

NOTE.—The following works may be referred to in connexion with the principal subjects discussed in the Lectures on Jurisprudence:—

Dumont's Bentham (translation by Hildreth), "Principles of Legislation," and 1st and 2nd parts of the "Principles of the Civil Code."
Stephens' "Criminal Law."
Mill's "Political Economy"—Chapters on Property, 1 and 2, Book II., and on the Function of Government, 8, 9, 10, 11, Book V.
Mill's "Representative Government."

By Professor of English Law.

The Lectures of the Professor for the preceding years.
Smith—Leading cases on branches of the Law.
Storey—Equity Jurisprudence.

The Senior Law Scholarship will be awarded, by Examination, to the most distinguished Student who shall have proceeded in the Course of Arts to the Degree of A.B., and who shall have completed the Course of Legal Study prescribed to Candidates for the Degree of LL.B. in the Queen's University in Ireland.

Examination for the Senior Scholarship in Law.

The Lectures of the Professors and subjects appointed for Scholarship Examination in the preceding years.
Sugden—The Law of Vendors and Purchasers.
Furlong—Law of Landlord and Tenant.
Taylor—Treatise on the Law of Evidence.
Stephen—Treatise on the Principles of Pleading.
Hallam—Constitutional History.
May's Constitutional Law.

DEGREES IN LAW.

Candidates for the Diploma of Elementary Law must have passed a Matriculation Examination* (see page 10), and pursued the following

Course of Study for the Diploma of Elementary Law.

First Session—Law of Property and Principles of Conveyancing—Jurisprudence.
The Course of the Professor of English Law for the Class of the First Year, "The Law of Real Property," comprises Elementary Instruction in this branch of Law, and in practical Conveyancing. The text-book read is Williams on "Real Property." The first volume of Stephens' edition of Blackstone's Commentaries, and the second volume of Kerr's edition, are recommended for perusal.
Second Session—Equity and Bankruptcy—Civil Law.
The Course of the Professor of English Law for the Class of the Second Year, "The Law of Personal Property," Equity, and "Bankruptcy," comprise instructions in those branches of law, and in the practical application of Precedents, &c. The text-books read are Williams on "Personal Property," Smith's "Manual of Equity," "The late Statute of Bankruptcy and Insolvency," by Adams. The second volume of Stephens' and Kerr's editions of Blackstone's Commentaries, and Smith's "Mercantile Law," are recommended for perusal.
Third Session—Common and Criminal Law.
The Course of the Professor of English Law for the Class of the Third Year, "Common and Criminal Law," comprises the History, Constitution, and Jurisdiction of the several Courts of Justice; Procedure in Crown and Civil Causes at Law and in Equity, as also in the Local Courts. The text-

*NOTE.—It will be sufficient for such Candidate to have passed his Examination at *any* time previous to applying for the Diploma. By the Act of Parliament, 14 and 15 Vic., cap. 88, it is provided, that every person who, as a Matriculated or Non-Matriculated Student, shall have attended the prescribed Lectures, and passed the prescribed Examinations of the Professors of the Faculty of Law for two Collegiate years, and who shall have duly served as an apprentice or clerk by contract in writing, duly stamped at or before the signing thereof, or within six months after, for the term of four years, shall, at any time after the expiration of five years from the commencement of such attendance on Lectures, or of such a period of service, whichever shall first happen, be qualified to be admitted as an Attorney or Solicitor as fully and effectually as any person having been bound, and having served five years is now qualified to be admitted. See also the same Act for the privileges extended to Graduates of the Queen's University, respecting admission to the profession of Attorney or Solicitor.

books are the third and fourth volumes of Blackstone's Commentaries, Stephens' and Kerr's editions, Broom's "Common Law," Broom's "Maxims," Smith's "Leading Cases," and Copinger's "County Courts," are recommended for perusal.

Students intending to proceed for the certificate of the Law Professors, so as to entitle themselves to serve an apprenticeship of four years instead of five, under the Act for amending the several Acts for the regulation of Attorneys and Solicitors (14 and 15 Vict., chap. 88), must enter their names with the Registrar of one of the Queen's Colleges of Cork, Belfast, and Galway, and pay the necessary College and Class Fees to the Bursar before the commencement of the Law Lectures in each Session.

Such Students need not pass the Matriculation Examination, but must attend the Lectures, and pass the College Examinations prescribed for the first and second years, of the course of study for Candidates for the Diploma in Elementary Law.

Candidates for the Degree of LL.B. will be admitted to Examination for that Degree from the Queen's University in Ireland, provided they shall have proceeded to the Degree of A.B., and shall have attended the Lectures and passed the Examinations prescribed for the Diploma of Elementary Law.

Students who have obtained the Degree of LL.B. will, at the expiration of two years after they have obtained the Degree, be admitted to the Examination for the Degree of LL.D. They are examined in the Laws of the Admiralty and Ecclesiastical Courts of England and Ireland, and in International Law.

Books suggested:

Lord Hale's Treatise, De Jure Maris.
Dr. FitzHenry Townsend's statement of the differences in Jurisdiction and Practice between the English and Irish Courts of Admiralty, annexed to the Report of the Royal Commission of Inquiry, 1864.
Rogers' Ecclesiastical Law.
Wheaton's International Law.
"Historicus," Letters of, on International Law.

Table of Class Fees.

ARTS CURRICULUM.

FIRST SESSION.

	£	s.	d.
English (One Term),	1	0	0
Greek,	2	0	0
Latin,	2	0	0
A Modern Continental Language,	2	0	0
Mathematics (First Course),	2	0	0
College Fee,	0	10	0

SECOND SESSION.

Logic (One Term),	1	0	0
Natural Philosophy,	2	0	0
Greek (Second Course),	2	0	0
Latin (Second Course),	2	0	0
Modern Continental Languages (Second Course),	1	0	0
Mathematics (Second Course),	2	0	0
College Fee,	0	5	0

THIRD SESSION.

English Language and Literature,	2	0	0
Metaphysics, or History, or Political Economy (Two Terms), each,	2	0	0
Chemistry,	2	0	0
Zoology or Botany,	2	0	0
College Fee,	0	5	0

ENGINEERING CURRICULUM.

FIRST SESSION.

	£	s.	d.
Mathematics (First Course),	2	0	0
Chemistry,	2	0	0
Modern Languages,	2	0	0
Geometrical Drawing,	2	0	0
Office Work,	2	0	0
Mineralogy, Geology, and Physical Geography,	2	0	0
College Fee,	0	10	0

SECOND SESSION.

Mathematics (Second Course),	2	0	0
Experimental Physics,	2	0	0
Civil Engineering,	2	0	0
*Office Work,	2	0	0
College Fee,	0	5	0

THIRD SESSION.

Natural Philosophy, applied,	2	0	0
Mathematical Physics,	2	0	0
Civil and Mechanical Engineering,	2	0	0
*Office Work,	2	0	0
College Fee,	0	5	0

* For students who have attended this course in the first year the fee is only £1.

Appendix A.

General Regulations of College, &c.

Table of Hours of Lecture.

Name of the Class.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Senior Greek,	9	9	10	–	9	–
Junior Greek,	10	–	9	9	10	–
Extra Greek,	–	10	–	10	–	–
Senior Latin,	10	–	9	–	10	–
Junior Latin,	9	10	10	10	–	–
Extra Latin,	–	11	–	11	–	–
English Language,	–	11	–	11	–	10
English Literature,	–	12	–	12	–	11
History,	12	–	12	–	12	–
Medical French,	12	–	12	–	12	–
Senior French (*Arts and Engineering*),	1	–	1	–	1	–
Junior French (*Arts and Engineering*),	2	–	2	–	2	–
German or Italian,	–	2	–	2	–	2
Celtic Languages,	12	–	12	–	12	–
Logic,	–	12	–	12	–	9
Metaphysics,	–	1	–	1	–	10
Political Economy and Jurisprudence,	–	11	11	11	11	–
Senior Mathematics,	2	–	2	–	2	–
Junior Mathematics,	12	–	12	–	12	–
Third Year's Mathematics,	3	–	3	–	3	–
Mathematical Physics,	–	–	12	–	12	–
Mathematical Physics (*Engineering*),	1	–	–	1	–	–
Experimental Physics, Senior,	11	–	11	–	11	–
Experimental Physics, Junior,	–	11	–	11	–	–
Engineering Physics,	–	1	–	–	1	–
Physics (Honor),	12	–	–	12	–	–
Chemistry,	11	–	11	–	11	–
Practical Chemistry,*	2	–	2	–	2	–
Zoology and Botany,	3	–	3	–	3	–
Geology and Mineralogy,	–	2	–	2	–	10
Senior Engineering,	12	–	12	–	12	–
Junior Engineering,	–	10	–	10	–	10
Geometrical Drawing,	10	–	10	–	10	–
Office Work (10 till 2),	–	10	–	10	–	10
Anatomy and Physiology,	1	1	1	1	1	–
Practical Anatomy,	12	12	12	12	12	–
Medicine,	3	–	3	–	3	–
Surgery,	–	4	–	4	–	1
Materia Medica,	–	3	–	3	–	12
Midwifery,	4	–	4	–	4	–
Medical Jurisprudence,	–	12	–	12	1	–
English Law (1st year),	–	11	11	11	11	–
English Law (2nd year),	–	3	3	3	3	–
English Law (3rd year),	–	9	9	9	9	–
English Law (4th year),	–	12	12	12	12	–
Jurisprudence,	–	1	1	1	1	–
Civil Law,	–	4	4	4	4	–
Constitutional and International Law,	–	10	10	10	10	–

The Fees payable by Students, whether Matriculated or Non-matriculated, to the several Professors, for attendance on the several Pass Courses of Lectures or instruction, which are now or may be hereafter prescribed by the College Council, for any Degree or other University distinction, shall be £1 for each Course extending over one Term only, and £2 for each Course extending over more than one Term of a Session, when attended for the first time, and £1 for each re-attendance on the same; except that the Fee payable for the Course of Anatomy and Physiology shall be £3 when attended for the first time, and £2 for every subsequent attendance; except also, that the Fee payable for Practical Anatomy or Practical Chemistry, shall be £3 for each attendance.

In the case of Students receiving special instructions, not prescribed as a

* If it be necessary to divide the Practical Chemistry Class, the hours for the Second Class will be at two on Tuesday and Thursday, and eleven on Saturday.

qualification for a Degree or other University distinction, or attending Honor Courses of Lectures, the Council shall have power to fix the amount of the Fee to be paid by each Student; provided that the Fee to be paid for any Honor Course of Lectures which Students are entitled to substitute for a prescribed Pass Course, shall in no case be less than £2.

Appendix A. — General Regulations of College, &c.

PROGRAMME OF THE TIMES AND SUBJECTS OF THE SCHOLARSHIP EXAMINATIONS FOR THE SESSION 1869–70.

Examination Days.	From 9 to 12 o'clock.	From 2 to 5 o'clock.
Thursday, October 21st,	Greek. Geometrical Drawing.	Greek.
Friday, October 22nd, .	Latin.	Mathematics.
Saturday, October 23rd,	Modern Languages.	Pathology. Latin.
Monday, October 25th,	Materia Medica. Therapeutics. English Language (1st year).	Zoology and Botany. Practical Anatomy. History and English Lit. (senior).
Tuesday, October 26th,	English Literature (2nd and 3rd year).	Anatomy and Physiology.
Wednesday, Oct. 27th,	Surveying, &c. Surgery.	Practical Chemistry.
Thursday, October 28th,	Political Economy.	Midwifery.
Friday, October 29th, .	Logic. Metaphysics,	Chemistry.
Saturday, October 30th,	Natural Philosophy.	Geology and Mineralogy.
Thursday, Dec. 2nd, .	English Law.	Civil Law.

APPENDIX.

Outlines of the Courses of Lectures delivered by the Professors of the Faculty of Arts.

LITERARY DIVISION OF THE FACULTY OF ARTS.

In Greek and Latin the classification of the Students is irrespective of their Collegiate standing; those of the First and Second years being distributed between two classes according to their proficiency. There is also in each of these Departments an Extra Class, the attendance on which is voluntary, and which consists generally of those Students who propose to become Candidates for Degree of A.M. or Classical Honors in the Queen's University, or for appointments in the Indian Civil Service.

Both the Extra and Ordinary Classes are open to Non-Matriculated Students, *i.e.* to gentlemen who have not yet commenced their Undergraduate course, or who do not intend to take *Degrees in Arts.*

THE GREEK LANGUAGE.

Professor, JOHN RYALL, LL.D.

Junior Class: Monday, Wednesday, Thursday, and Friday.—Xenophon, Anab. Book VII.

Second Year: Monday, Wednesday, Thursday, and Friday.—Sophocles—Philoctetes; Demosthenes in Midiam.

Third Year: Tuesday, Thursday.—Æschylus—Eumenides; Thucydides, Book VI.

Exercises in Prose and Verse, according to the proficiency of the Students.

Appendix A.

General Regulations of College; &c.

The Latin Language.

Professor, Bunnell Lewis, M.A., F.S.A.

Senior Class, Monday, Wednesday, and Friday:
Juvenal—Satires, XIII.—XVI.
Cicero—De Natura Deorum, Book I., beginning at c. 21.
Junior Class, Monday, Tuesday, Wednesday, and Thursday:
Livy—Part of Book XXIII.
Virgil—Georgics, Book II.
Exercises in both Classes chiefly from Arnold's Introduction to Latin Composition.
Extra and Third Year's Class, Tuesday and Thursday:
Tacitus—Annals, Book IV.
Lucretius, Book III.

In this Class special attention is paid to original Composition, and to translation from English Authors into Latin.

History, English Literature, and the English Language.

Professor, William Rushton, M.A.

1st and 2nd Term. { History—Monday, Wednesday, and Friday.
English Literature—Tuesday, Thursday, and Saturday.
2nd Term—The English Language—Tuesday, Thursday, Saturday.

History:

1. European History from the decline of the Roman Empire to the present time.
2. History of Britain and Ireland.

English Literature:

The Course will include the History of English Literature, along with a Critical Examination of its Standard Works from the earliest period up to the present day.

The English Language:

1. The History of the English Language.
First Year.—Text Book, Craik's Outlines.
Third Year.—Text Books, Max Müller on the Science of Language.
Marsh's Lectures.
2. Grammar and Composition.
Text Books, Latham—English Language.
Adams—Elements of the English Language.
Rushton—Rules and Cautions in English Grammar.
Campbell's Philosophy of Rhetoric.
Whately's Rhetoric.

English Composition.

Essays on subjects discussed in the Lectures. Translations. Analysis. Original Essays.

Modern Languages.

Professor, R. De Vericour, M.A.

French Class (Medical), Mondays, Wednesdays, and Fridays, at 12 o'clock.
Senior French (Arts and Engineering), Mondays, Wednesdays, and Fridays, at 1 o'clock.
Junior French Class (Arts and Engineering), Mondays, Wednesdays, and Fridays, at 2 o'clock.
German or Italian, Tuesdays and Fridays, at 2 o'clock.
Medical French—Lectures sur les Sciences, par Achille Comte. Extracts from Bichat, Andral, Lallemand, and Chomel. Weekly Lectures on the Grammar and Idioms.
Senior and Junior French—Corneille's Cid and Cinna. Fables de Lafontaine. Racine's Athalie, and Esther. Histoire de la Revolution Française, par Mignet. La Misanthrope and L'Avare of Molière. Histoire de la Littérature Française, par Demogeot. Lectures sur les Sciences, par Achille Comte. Weekly Lectures on the Grammar and Idioms.
Italian—Silvio Pellico. Tasso. Extracts from Machiavelli, Guicciardini, Davila, Manzoni. Weekly Lectures.
German—Goethe's Ballads and Iphigenie. Schiller's Wilhelm Tell. National-Literatur, von A. F. Villmar. Weekly Lectures.

SPECIAL COURSE NOT REQUIRED FOR A DEGREE.—CELTIC LANGUAGES.

Professor, OWEN CONNELLAN, Esq.

Monday, Wednesday, and Friday.

Subject—I. The Celtic Family of Languages; and its existing derivations, the Erse or Gaelic, Manx, Welch, Armorican, and Hiberno-Celtic. The Ogham Alphabet. The Ancient Literature of Ireland, viz.:—The earlier Bardic Compositions, the Ossianic Poems and Fenian Legends; View of the Contemporaneous state of Ireland.*

,, II. The Irish Language as now extant, its Grammar, Vocabulary, and Dialects. In this part of the course, the Student will be taught to speak and write the language grammatically.

* The Lectures will be illustrated by reference to Irish MSS., and such publications on Irish Historical and general Literature as are at present accessible.

SCIENCE DIVISION OF THE FACULTY OF ARTS.

MATHEMATICS.

Professor, CHARLES NIVEN, B.A.

Junior Class, Monday, Wednesday, and Friday.
Subjects—Arithmetic, Algebra, Geometry, and Plane Trigonometry.

Second Year's Class, Monday, Wednesday, and Friday.
Subjects—Analytical Geometry, Trigonometry, Differential and Integral Calculus.

Third Year's Class:
Subjects—Geometry of three dimensions, Differential Equations, &c.
Exercises are regularly set in each of the Classes.

LOGIC AND METAPHYSICS.

Professor, GEORGE SIDNEY READ, M.A.

2nd Term, . Logic, . Tuesday, Thursday, and Saturday.
1st & 2nd Terms, Metaphysics, Do. do. do.

Logic.—This Course consists of:—

I.—Lectures, Examinations, and Exercises in Aldrich's Compendium of Logic, occupying the early part of the Term, &c.

II.—A full discussion of Classification, the Theory of Hypothetical Syllogisms and of Induction, and the Analytic of Logical Forms, as contained in the works of Mill, Whately, Thompson, and Baynes.

Throughout the Course the Students will be expected to familiarize themselves with the reduction of arguments to their strict Logical Form by written exercises, which will be examined by the Professor.

Metaphysics.—This Course will embrace:—

I.—The Philosophy of the Inductive Sciences, illustrated by reference to Lord Bacon, Whewell, and Mill; and—

II.—The History of Mental Philosophy, comprising—

1st.—The origin, progress, and development of Modern Philosophy anterior to the rise of the Scottish School.

2nd.—A critical examination of the works of the more celebrated writers of that School.

3rd.—A brief view of the present state of Philosophy in the British Islands and on the Continent.

POLITICAL ECONOMY.

Professor, RICHARD HORNER MILLS, M.A.

Political Economy.—The nature and distribution of wealth, the principles which regulate Rents, Profits, and Wages; the Principles of Commerce, of Taxation, of the Funding System, and of Currency and Banking.

Books recommended:—

Adam Smith—Wealth of Nations.
Senior—Political Economy.
Fawcett's Manual of Political Economy.
John Stuart Mill—Political Economy.

Appendix A.

General Regulations of College, &c.

Richard H. Mills—Lectures on Currency and Banking (Second Edition).
M'Culloch—Taxation and Funding (Third Edition).
Goschen on Foreign Exchanges.

The Course consists of Twenty-four Lectures, delivered in the months of December, February, and March; the Students are required in the intervals to prepare the subjects which will be pointed out by the Professor.

Chemistry.

Professor, John Blyth, M.D.

Monday, Wednesday, and Friday.

The Course is divided into Inorganic and Organic Chemistry.

In the first part are discussed the Laws of Combination and Affinity, Molecular Chemistry and Crystallography, and the History of the Non-Metallic and Metallic substances.

In the Organic portion of the Course will be considered the subjects of Organic Analysis, Organic Series, Compound Radicals and Types, Metamorphosis of Organic Bodies, History of special Animal and Vegetable Bodies.

In treating of the Laws of Chemistry, and the History of Inorganic and Organic Bodies, those points will be chiefly dwelt upon which have a practical bearing in the Arts, Medicine, Engineering, and Agriculture. Thence, during the Course, attention will be directed to the application of Chemistry to Medicine and Physiology, to Metallurgic Operations, Chemical Manufactures, Building Materials, Soils, Manures.

Fee, for each Sessional Course, £2. Each subsequent Course in Medicine, £1.

Analytical Chemistry:

The Chemical Laboratory is open daily, except on Saturdays, from 10 to 4 o'clock, under the superintendence of the Professor, for students desirous of prosecuting an extended course of qualitative and quantitative analysis, and for the purpose of original investigation in connexion with the arts, or in the higher departments of Scientific Chemistry.

Natural Philosophy.

Professor, John England, M.A.

Experimental Physics (Senior):

Text Books—Galbraith and Haughton's Manuals of Mechanics, Hydrostatics, &c.; Jamin; Traite de Physique.

Experimental Physics (Junior):

Text Books—Ganot, Traite de Physique.

Mathematical Physics:

Text Books—Duhamel's *Mecanique*. Parkinson's *Optics*. Brinkley's *Astronomy*.

Engineering Physics:

Text Books—Tate's *Exercises in Mechanics*, selections from the works of Mosely, De Pambour, Weisbach, Twisden's Practical Mechanics, &c.

Natural History.

Professor, Joseph Reay Greene, B.A., M.D.

Monday, Wednesday, and Friday.

The Lectures delivered by the Professor of Natural History are as follows:—

A Course of Lectures on General Zoology.
A Course of Lectures on Botany.

Students may obtain Certificates of Attendance on all or any of these Courses.

Text Books recommended:

In Botany—"Elementary Course of Botany," by Henfrey.
In Zoology—"Zoologie" (in Cours Elémentaire d'Histoire Naturelle), par Milne Edwards; or the English translation of the same work by Dr. Knox.

Such Students as desire during the Summer months to pursue the study of Botany in the field, are requested to provide themselves with Lindley's "Descriptive Botany," and Bentham's "Handbook of the British Flora."

Geology and Mineralogy.

Professor, Robert Harkness, F.R.S.S.L. & E., F.G.S.

Tuesday, Thursday, and Saturday.

General Structure of the Earth; the causes at present in operation which modify its surface; Nature of Rocks which enter into composition with the crust of the Globe; description and classification of Sedimentary Deposits; Organic Remains; Physical Geography of the Earth during the several geological epochs; characters and nature of Igneous, Plutonic, and Metamorphic Rocks; Mineral Veins—their contents and mode of occurrence; application of Geology to Engineering, Mining, Agriculture and Land Improvement.

Forms, Structure, Physical and Chemical characters of Minerals; descriptions of the most important simple minerals—circumstances and conditions under which they are found.

Civil Engineering.

Professor, Alexander Jack, M.A.

First Year.—Monday, Wednesday, and Friday.

Subject of Lectures—Orthographic Projection; Descriptive Geometry; Shadows; Isometric Projection; Perspective; Geometry of the Oblique Bridge; Principles of Architecture.

Text Books—Hall's Descriptive Geometry; Engineer and Machinist's Drawing Book; Rickman's Architecture; Buck on Oblique Bridges.

Second Year.—Tuesday, Thursday, and Saturday.

Subject of Lectures—Surveying and Levelling.

Text Books—Rankine's Civil Engineering; Cotton's Manual of Railway Engineering; Williams' Geodesy.

Third Year.—Monday, Wednesday, and Friday.

Materials used in Construction; Principles of Construction of Bridges, Roads, Railways, Canals; Hydraulic Engineering; Strength of Materials; Principles of the Construction of the different Machines employed by the Engineer.

Drawing Office—Attended by all the Classes—Tuesday, Thursday, and Saturday.

The First Year's Class are chiefly employed in drawing the problems given at lectures, and a few easy examples of their applications. The Second and Third Years' Classes, in making working drawings of examples of the subjects of lectures, and in Mapping.

Practical Instruction in the Field in the use of Surveying Instruments will be given during the Session.

Special Prospectus of Courses of Instruction given in the Colleges which are applicable to the Examination for the Indian Civil Service.

Subjects of Examination for the Indian Civil Service.	*Lectures on these Subjects in Queen's College, Cork.*
1. English Language and Literature:	History and English Language—*Professor,* William Rushton, M.A.
a. Composition, Marks, 500	*First Term.*—Modern History: Monday, Wednesday, and Friday.
b. English Literature and History, including that of the Laws and Constitution, Marks, 1,000	*Second Term.*—English Literature: Tuesday, Thursday, and Saturday. History of the English Language: Tuesday, Thursday, Saturday.
1,500	English Composition will, at the stated periods, be required from the students.

Appendix A.

Special Prospectus of Courses for Competitive Examinations.

2. LANGUAGE, LITERATURE, and HISTORY of GREECE:
Marks, 750

GREEK—*Professor*, John Ryall, LL.D.
Senior Class: Monday, Friday, Wednesday.
Junior Class: Monday, Friday, Wednesday, Thursday.
Extra Class: Tuesday, Thursday.

3. LANGUAGE, LITERATURE, and HISTORY of ROME:
Marks, 750

LATIN—*Professor*, Bunnell Lewis, M.A. F.S.A.
Senior Class: Monday, Wednesday, Friday.
Junior Class: Monday, Tuesday, Wednesday, Thursday.
Extra Class: Tuesday and Thursday.

The Extra Class, both in Latin and Greek, the attendance on which is voluntary, consists generally of those students who propose to become Candidates for the Degree of M.A., or Classical Honors, in the Queen's University, or for appointments in the Indian Civil Service.

4. LANGUAGE, LITERATURE, and HISTORY of FRANCE:
Marks, 375

FRENCH—*Professor*, R. De Vericour, M.A.
Senior Class: Monday, Wednesday, Friday.
Junior Class: Monday, Wednesday, Friday.

5. LANGUAGE, LITERATURE, and HISTORY of GERMANY:
Marks, 375

GERMAN.
Tuesday, Thursday.

6. LANGUAGE, LITERATURE, and HISTORY of ITALY:
Marks, 375

ITALIAN.
Monday, Wednesday, and Friday.

7. MATHEMATICS, Pure and Mixed:
Marks, 1,250

MATHEMATICS—*Professor*, Charles Niven, B.A.
Junior Class: Monday, Wednesday, Friday.
Senior Class: Monday, Wednesday, Friday.

MATHEMATICAL PHYSICS—*Professor*, John England, M.A.
Tuesday, Thursday, and Saturday.

8. NATURAL SCIENCES: that is, Chemistry, Electricity, and Magnetism, Natural History, Geology, and Mineralogy:
Marks, 500

*** No Candidate will be allowed to be examined in more than three of the branches of knowledge included under this head, and the total (500 marks) may be obtained by adequate proficiency in any three.

CHEMISTRY—*Professor* Blyth, M.D.
Monday, Wednesday, and Friday.

EXPERIMENTAL PHYSICS (Electricity and Magnetism)—*Professor*, John England, M.A.
Monday, Wednesday, and Friday.

NATURAL HISTORY—*Professor*, J. R. Greene, B.A., M.D.
Monday, Wednesday, and Friday.

GEOLOGY and MINERALOGY—*Professor*, Robert Harkness, F.R.SS.L. & E., F.G.S.
Tuesday, Thursday, and Saturday.

9. Moral Sciences: that is, Logic, Mental and Moral Philosophy: Marks, 500	Logic and Metaphysics—*Professor*, G. S. Read, M.A. Logic: Tuesday, Thursday, Saturday. Metaphysics: Tuesday, Thursday, Saturday.	*Appendix A.* — Special Prospectus of Courses for Competitive Examinations.
	Jurisprudence and Political Economy—*Professor*, Richard Horner Mills, M.A.	

Courses of Instruction given in the College which are applicable to the Competitive Examination for Admission to the Royal Military Academy at Woolwich.

Subjects of Examination for the direct appointment to the Practical Class at Woolwich.	*Lectures on these Subjects in Queen's College, Cork.*
Mathematics (Pure): Marks, 2,500	*Professor*, Charles Niven, B.A. Junior Class: Monday, Wednesday, Friday. Senior Class: Monday, Wednesday, Friday.
Mathematics (Mixed):— Statics, Dynamics, Hydrostatics: Marks, 1,000	*Professor*, John England, M.A. Tuesday, Thursday, and Saturday.
Language of Ancient Rome: Marks, 1,500	*Professor*, Bunnell Lewis, M.A., F.S.A. Junior Class: Monday, Tuesday, Wednesday, Thursday.
Language of Ancient Greece: Marks, 1,500	*Professor*, John Ryall, LL.D. Junior Class: Monday and Friday, Wednesday and Thursday.
Language of France: Marks, 1,000	*Professor*, Raymond de Vericour, M.A. Monday, Wednesday, and Friday.
And Germany: Marks, 1,000	
English Language, Literature, Composition, History and Geography (Modern): Marks, 3,000	*Professor*, William Rushton, M.A. Tuesday, Thursday, and Saturday.
Experimental Sciences:— Chemistry: } Marks, 1,000	*Professor*, John Blyth, M.D. Monday, Wednesday, and Friday.
Heat, Electricity, including Magnetism: } Marks, 1,000	*Professor*, John England, M.A. Monday, Wednesday, and Friday.
Natural Sciences:— Mineralogy and Geology: Marks, 1,000	*Professor*, Robt. Harkness, F.R.SS.L. & E., F.G.S.
Drawing, *i.e.*, Elementary Geometrical Drawing, including the use of Drawing Instruments: Marks, 500	*Professor*, Alexander Jack, M.A. Monday, Wednesday, and Friday.
Machinery, Architectural, Topographical, Landscape, or Figure Drawing: Marks, 500	Monday, Wednesday, and Friday.

Appendix A.

Special Prospectus of Courses for Competitive Examinations.

Competitive Examinations for admission are held in London twice a year, in January and July. They are conducted by Examiners appointed for the purpose, in the presence and under the superintendence of the Council of Military Education.

The Candidates must be between 16 and 19 years of age.

The admissions will be determined by the result of the examination, the subjects of which will be as follows, viz.:—

		Marks.
1. Mathematics,	Pure, Section I. Arithmetic, Algebra, Euclid, Plane Trigonometry, . 2,000	
	Pure, Section II. Spherical Trigonometry, elements of Co-ordinate Geometry, and of the Differential and Integral Calculus,* . 500	3,500
	Mixed:—Statics, Dynamics, and Hydrostatics, ... 1,000	
2. English Language and Composition, ...		1,000
3. History of England, its Dependencies and Colonies, . .		1,000
4. Geography (Modern), ...		1,000
5. Classics, Latin Language, ...		1,500
5. Classics, Greek ditto, ...		1,500
6. French Language, ...		1,000
7. German ditto, ...		1,000
8. Hindustani ditto, ...		1,000

The examination in French, German, and Hindustani, will include writing from dictation.

9. Experimental Sciences, *i.e.*, Chemistry, Heat, Electricity, including Magnetism, ...	1,000
10. Natural Sciences, *i.e.*, Mineralogy and Geology, . .	1,000
11. Drawing, Elementary Geometrical Drawing, including the use of Drawing Instruments, . . .	500
11. Drawing, Free-hand Drawing of Machinery, Architectural, Topographical, Landscape, or Figure Subjects, .	500

* *Syllabus of Examination in the Differential and Integral Calculus.*

DIFFERENTIAL CALCULUS.

The meaning of Differentiation.
The Differentiation of Elementary Functions of one independent variable.
The theorems of Taylor and Maclaurin, with their applications.
The theory of Maxima and Minima, with its applications.
The equations to the Tangents, Normals, and Asymptotes of Plane Curves.
The curvature of Plane Curves and their radii of curvature and evolutes.
The Differential Coefficients of the Arcs and Areas of Plane Curves to rectangular and polar Co-ordinates, and of the surfaces and volumes of solids of revolution.

INTEGRAL CALCULUS.

The meaning of Integration.
The Integration of Elementary Functions.
The Integration of Rational Fractions.
The determination of the lengths and areas of Plane Curves, and of the surfaces and volumes of solids of revolution.

No Candidate will be allowed to be examined in more than five subjects, of which one must be Mathematics; and no one who does not obtain at least 700 marks in Section I. of Pure Mathematics will be eligible for an appointment.

Residences.

There is no accommodation for the residence of students within the College, but it is provided by the Statutes that every Matriculated Student, being under the age of Twenty-one Years, shall reside, during the College Terms, with his parent or guardian, or with some relation or friend, to whose care he shall have been committed by his parent or guardian, or in one of the Boarding-houses licensed by the President of the College and arranged for the reception of students, who are then placed under the moral care and spiritual charge of the Deans of Residence of their respective creeds.

The Terms for Board and Lodging are generally at the rate of from £30 to £40 a-year.

Appendix A.

Deans of Residences.

DEANS of RESIDENCES.

Church of England,	Rev. George Webster, D.D.
Presbyterian Church,	Rev. William Magill.
Wesleyan Communion,	Rev. Edward Best.
Non-Subscribing Presbyterian,	Rev. W. Whitelegge, M.A.

N.B.—Letters from persons desiring further information, to be addressed to the Registrar.

Signed,
By order of the President,
ROBERT JOHN KENNY, *Registrar.*

APPENDIX B.

Appendix B.

Selection of Papers used at the Sessional Examinations.

SELECTION OF PAPERS OF QUESTIONS USED AT THE SESSIONAL EXAMINATIONS.

THIRD YEAR'S GREEK CLASS.

1. Give the dates of the commencement and close of the Peloponnesian war, and notice its most important incidents.
2. Translate the following passages, making such comments as you may think necessary :—

THUCYDIDES, Book IV.

a. Ἐς τοῦτό τε περιέστη ἡ τύχη ὥστε Ἀθηναίους μὲν ἐκ γῆς τε καὶ ταύτης Λακωνικῆς ἀμύνεσθαι ἐκείνους ἐπιπλέοντας, Λακεδαιμονίους δὲ ἐκ νεῶν τε καὶ ἐς τὴν ἑαυτῶν πολεμίαν οὖσαν ἐπ' Ἀθηναίους ἀποβαίνειν· ἐπὶ πολὺ γὰρ ἐποίει τῆς δόξης ἐν τῷ τότε τοῖς μὲν ἠπειρώταις μάλιστα εἶναι καὶ τὰ πεζὰ κρατίστους, τοῖς δὲ θαλασσίοις τε καὶ ταῖς ναυσὶ πλεῖστον προέχειν.—ch. 12.

b. Σωφρόνων δὲ ἀνδρῶν οἵτινες τἀγαθὰ ἐς ἀμφίβολον ἀσφαλῶς ἔθεντο (καὶ ταῖς ξυμφοραῖς οἱ αὐτοὶ εὐξυνετώτερον ἂν προσφέροιντο), τόν τε πόλεμον νομίσωσι μὴ καθ' ὅσον ἄν τις αὐτοῦ μέρος βούληται μεταχειρίζειν, τούτῳ ξυνεῖναι. ἀλλ' ὡς ἂν αἱ τύχαι αὐτῶν ἡγήσωνται· καὶ ἐλάχιστ' ἂν οἱ τοιοῦτοι πταίοντες, διὰ τὸ μὴ τῷ ὀρθουμένῳ αὐτοῦ πιστεύοντες ἐπαίρεσθαι, ἐν τῷ εὐτυχεῖν ἂν μάλιστα καταλύοιντο.—ch. 18.

c. Μετὰ δὲ ταῦτα γενομένης τῆς ἀνακωχῆς ξυνῆλθον ἐς λόγους ὅ τε Κλέων καὶ ὁ Δημοσθενης καὶ ἐκείνων Στύφων ὁ Φάρακος, τῶν πρότερον ἀρχόντων τοῦ μὲν πρώτου τεθνηκότος, Ἐπιτάδου τοῦ δὲ μετ' αὐτὸν Ἱππαγρέτου ἐφῃρημένου ἐν τοῖς νεκροῖς ἔτι ζῶντος κειμένου ὡς τεθνεῶτος, αὐτὸς τρίτος ἐφῃρημένος ἄρχειν κατὰ νόμον, εἴ τι ἐκεῖνοι πάσχοιεν.—ch. 38.

d. Πόλεμον γὰρ αἱρομένων ἡμῶν καὶ ἐπαγομένων αὐτούς, ἄνδρας οἳ καὶ τοὺς μὴ ἐπικαλουμένους αὐτοὶ ἐπιστρατεύουσι, κακῶς τε ἡμᾶς αὐτοὺς ποιούντων τέλεσι τοῖς οἰκείοις, καὶ τῆς ἀρχῆς ἅμα προκοπτόντων ἐκείνοις, εἰκός, ὅταν γνῶσιν ἡμᾶς τετρυχωμένους, καὶ πλέονί ποτε στόλῳ ἐλθόντας αὐτοὺς τάδε πάντα πειράσασθαι ὑπὸ σφᾶς ποιεῖσθαι.—ch. 60.

e. Καὶ οὐκ ἀδικεῖν ἔτι νομιῶ προσεῖναι δέ τί μοι καὶ κατὰ δύο ἀνάγκας τὸ εὔλογον, τῶν μὲν Λακεδαιμονίων, ὅπως μὴ τῷ ὑμετέρῳ εὖνῳ, εἰ μὴ προσαχθήσεσθε, τοῖς ἀπὸ ὑμῶν χρήμασι φερομένοις παρ' Ἀθηναίους βλάπτωνται, οἳ δὲ Ἕλληνες ἵνα μὴ κωλύωνται ὑφ' ὑμῶν δουλείας ἀπαλλαγῆναι.—ch. 87.

f. Νυνὶ δ' εἴ τῳ καὶ ἀσφαλέστερον ἔδοξεν εἶναι, μεταγνώτω. οὐ γὰρ τὸ προμηθές, οἷς ἂν ἄλλος ἐπίῃ, περὶ τῆς σφετέρας ὁμοίως ἐνδέχεται λογισμὸν καὶ ὅστις τὰ μὲν ἑαυτοῦ ἔχει, τοῦ πλείονος δὲ ὀρεγόμενος ἐκὼν τινι ἐπέρχεται.—ch. 92.

Appendix H.

Selection of Papers used at the Sessional Examinations.

3. Punctuate, accentuate, and translate:—

καλως δε ενομιζον σφισιν αμφοτερα εχειν αμα μεν το μη επιχειρειν προτερους μηδε μαχης και κινδυνου εκοντας αρξαι επειδη γε εν φανερω εδειξαν ετοιμοι οντες αμυνεσθαι και αυτοις ωσπερ ακονιτι την νικην δικαιως αν τιθεσθαι εν τω αυτω δε και προς τους Μεγαρεας ορθως ξυμβαινειν.

4. Translate into Attic Greek:—

But where God hath a purpose to destroy, wise men grow short-lived, and the charge of things is committed to such as either cannot see what is for their good, or know not how to put in execution any sound advice. The course which Memnon had propounded must, in all appearance of reason, have brought the Macedonian to a great perplexity, and made him stand still awhile at the straits of Cilicia, doubting whether it were more shameful to return or dangerous to proceed; for had Cappadocia and Paphlagonia been wasted while Alexander was far off, and the straits of Cilicia been defended by Arsenes, governor of that province, with the best of his forces, hunger would not have suffered the enemy to stay the trial of all means that might be thought upon of forcing that passage; or if the place could not have been maintained, yet might Cilicia, at better leisure have been so thoroughly spoiled, that the heart of his army should have been broken, by seeking out miseries by painful travel.

Senior Greek Class.

1. Translate, in English:—

Thucydides, Book I., c. 84.

Καὶ τὸ βραδὺ καὶ μέλλον, ὃ μέμφονται μάλιστα ἡμῶν, μὴ αἰσχύνεσθε. σπεύδοντές τε γὰρ σχολαίτερον ἂν παύσαισθε διὰ τὸ ἀπαράσκευοι ἐγχειρεῖν· καὶ ἅμα ἐλευθέραν καὶ ἐνδοξοτάτην πόλιν διὰ παντὸς νεμόμεθα· καὶ δύναται μάλιστα σωφροσύνη ἔμφρων τοῦτ' εἶναι. μόνοι γὰρ δι' αὐτὸ εὐπραγίαις τε οὐκ ἐξυβρίζομεν καὶ ξυμφοραῖς ἧσσον ἑτέρων εἴκομεν, τῶν τε ξὺν ἐπαίνῳ ἐξοτρυνόντων ἡμᾶς ἐπὶ τὰ δεινὰ παρὰ τὸ δοκοῦν ἡμῖν οὐκ ἐπαιρόμεθα ἡδονῇ, καὶ ἤν τις ἄρα ξὺν κατηγορίᾳ παροξύνῃ, οὐδὲν μᾶλλον ἀχθεσθέντες ἀνεπείσθημεν. πολεμικοί τε καὶ εὔβουλοι διὰ τὸ εὔκοσμον γιγνόμεθα, τὸ μὲν ὅτι αἰδῶς σωφροσύνης πλεῖστον μετέχει, αἰσχύνης δὲ εὐψυχία, εὔβουλοι δὲ ἀμαθέστερον τῶν νόμων τῆς ὑπεροψίας παιδευόμενοι καὶ ξὺν χαλεπότητι σωφρονέστερον ἢ ὥστε αὐτῶν ἀνηκουστεῖν, καὶ μὴ τὰ ἀχρεῖα ξυνετοὶ ἄγαν ὄντες, τὰς τῶν πολεμίων παρασκευὰς λόγῳ καλῶς μεμφόμενοι ἀνομοίως ἔργῳ ἐπεξιέναι, νομίζειν δὲ τάς τε διανοίας τῶν πέλας παραπλησίους εἶναι, καὶ τὰς προσπιπτούσας τύχας οὐ λόγῳ διαιρετάς.

2. Retranslate into Greek:—

Because we take a lower ground in our contract-suits with the allies, and because we make decisions in our own courts on the footing of equal laws, we are thought to be litigious. And no one of them considers why it is that this reproach is not brought against those who have empire in any other quarter also, and are less moderate towards their subject-allies than we: for those who are able to act with force, have no additional need of appealing to justice. But they, from having been accustomed to hold intercourse with us on a fair footing, if contrary to their notions of right they have been placed in an inferior position, in any way whatever, either by a judicial decision, or by the power which our empire confers on us, feel no gratitude at not being deprived of the greater part (of their possessions), but are more indignant at what they lose, than if from the first we had laid aside all law and openly taken advantage of them.

3. Translate into Iambic verse :—

Have I a tongue to doom my brother's death,
And shall that tongue give pardon to a slave?
My brother kill'd no man, his fault was thought,
And yet his punishment was bitter death.
Who sued to me for him? Who, in my wrath,
Kneel'd at my feet, and bade me be advised?
Who spoke of brotherhood! Who spoke of love?
Who told me how the poor soul did forsake
The mighty Warwick, and did fight for me?

Junior Greek Class.

Translate :—

(A).—Euripides—*Ion*, vv. 645-668.

οἱ τὰς πόλεις ἔχουσι κἀξιώματα
τοῖς ἀνθαμίλλοις εἰσὶ πολεμιώτατοι.
ἐλθὼν δ' ἐς οἶκον ἀλλότριον ἔπηλυς ὢν
γυναῖκά θ' ὡς ἄτεκνον, ἡ κοινουμένη
τὰς συμφορὰς σοι πρόσθεν, ἀπολαχοῦσα νῦν
αὐτὴ καθ' αὑτὴν τὴν τύχην οἴσει πικρῶς,
πῶς δ' οὐχ ὑπ' αὐτῆς εἰκότως μισήσομαι,
ὅταν παραστῶ σοὶ μὲν ἐγγύθεν ποδός,
ἡ δ' οὖσ' ἄτεκνος τὰ σὰ φίλ' εἰσορᾷ πικρῶς;
κᾆτ' ἢ προδοὺς σύ μ' ἐς δάμαρτα σὴν βλέπῃς
ἢ τἀμὰ τιμῶν δῶμα συγχέας ἔχῃς;
ὅσας σφαγὰς δὴ φαρμάκων θανασίμων
γυναῖκες εὗρον ἀνδράσιν διαφθοράς!
ἄλλως τε τὴν σὴν ἄλοχον οἰκτείρω, πάτερ,
ἄπαιδα γηράσκουσαν· οὐ γὰρ ἀξία
πατέρων ἀπ' ἐσθλῶν οὖσ' ἀπαιδίαν νοσεῖν.
τυραννίδος δὲ τῆς μάτην αἰνουμένης
τὸ μὲν πρόσωπον ἡδύ, τἀν δόμοισι δὲ
λυπηρά· τίς γὰρ μακάριος, τίς εὐτυχής
ὅστις δεδοικὼς καὶ περιβλέπων βίαν
αἰῶνα τείνει; δημότης ἂν εὐτυχὴς
ζῇν ἂν θέλοιμι μᾶλλον ἢ τύραννος ὤν,
ᾧ τοὺς πονηροὺς ἡδονὴ φίλους ἔχειν.
ἐσθλοὺς δὲ μισεῖ κατθανεῖν φοβούμενος.

1. *a.* ἐς οἶκον—ὡς γυναῖκα; account for the employment of ἐς and ὡς in these two constructions. *b.* Supply the ellipsis after ἀπολαχοῦσα, v. 649. *c.* What is the government of φαρμάκων, v. 656, and of ἀπαιδίαν, v. 660? *d.* What is the construction of ὦ, v. 667? *e.* Account for the repetition of ἄν, in verses 665, 666.

2. Give the derivation or composition of ἀνθάμιλλος, ἔπηλυς, σφαγή, εἰκότως, βλασφημία.

3. Parse *fully* παραστῶ, εἰσορᾷ, κᾆτ', συγχέας, τἀν, κατθανεῖν, ἤμπισχεν, ἀνεῖσαν, παρείς.

4. Define the term *cæsura*, and point out the principal cæsuras in the first three lines of the extract.

(B.)—1. Punctuate, accentuate, and translate the following passage :—
Ετυγχανον λεγων οτι πολλαι και καλαι ελπιδες ημιν ειεν σωτηριας πρωτον μεν γαρ ημεις μεν εμπεδουμεν τους των θεων ορκους οι δε πολεμιοι επιωρκησασι τε και τας σπονδας και τους ορκους λελυκασιν ουτω δε εχοντων εικος τοις μεν πολεμιοις εναντιους ειναι τους θεους ημιν δε συμμαχους.

2. *a.* Write down all the persons of ἐμπεδοῦμεν in the contracted forms. *b.* Derive σπονδή and ὅρκος, and distinguish between σπονδή and σωνδαί.

Appendix B.

Selection of Papers used at the Sessional Examinations.

(C.)—Translate into Greek :—

1. He took pleasure in doing kind offices to his friends.
2. A dog was pursuing a man, and he took refuge in a house.
3. The horse has very beautiful ears.
4. The Greeks of that day fought against the Persians.
5. If my brother had had three horses, he would have given one of them to his father.
6. If we have money we shall have friends.
7. I should like to see the cavalry of the Persians charging the Greeks.
8. But for the swiftness of their feet, the men would not have escaped; for the others pursued at full speed.

THIRD YEAR'S GREEK CLASS.

1. In what year was the *Agamemnon* first represented, and what were the remaining pieces in the Tetralogy to which it belonged? Of whom did the chorus consist?

2. Translate the following sentences, adding such comments as you may think necessary :—

a. Τὰ δεσποτῶν γὰρ εὖ πεσόντα θήσομαι
τρὶς ἓξ βαλούσης τῆσδε μοι φρυκτωρίας.

b. Κεδνὸς δὲ στρατόμαντις ἰδὼν δύο λήμασιν ἴσους
Ἀτρεΐδας μαχίμους ἐδάη λαγοδαίτας
πόμπους τ' ἀρχάς.

c. Σὺ δ' εἴ τι κεδνὸν εἴτε μὴ πεπυσμένη
Εὐαγγέλοισιν ἐλπίσιν θυηπολεῖς,
Κλύοιμ' ἂν εὔφρων· οὐδὲ σιγώσῃ φθόνος.

d. Νικᾷ δ' ὁ πρῶτος καὶ τελευταῖος δραμών,

e. . . . . . οὐκ ἔφα τις
θεοὺς βροτῶν ἀξιοῦσθαι μέλειν
Ὅσοις ἀφίκτων χάρις
πατοῖθ'· ὁ δ' οὐκ εὐσεβής.

f. Ὀμμάτων δ' ἐν ἀχηνίαις
ἔρρει πᾶσ' Ἀφροδίτα.

g. Τὸ δ' ὑπερκόπως κλύειν εὖ
βαρύ·

h. Ἰλίῳ δ' κῆδος ὀρ-
θώνυμον τελεσσίφρων
Μῆνις ἤλασεν, τραπέζας ἀτι-
μωσιν ὑστέρῳ χρόνῳ
καὶ Συνεστίου Διὸς
πρασσομένα τὸ νυμφότιμον
μέλος ἐκφάτως τίοντας,
Ὑμέναιον, ὃς τοτ' ἐπέρρεπεν
Γαμβροῖσιν ἀείδειν

i. . . . ἐγὼ δ' οὖν
ἐθέλω δαίμονι τῷ Πλεισθενιδῶν
ὅρκους θεμένη τάδε μὲν στέργειν,
δύστληθ' περ ὄνθ'· ὃ δε λοιπόν, ἰόντ
ἐκ τῶνδε δόμων ἄλλην γενέαν
τρίβειν θανάτοις αὐθένταισιν.

ὅστις δ' ἀγαθὸς προβατογνώμων
οὐκ ἔστι λαθεῖν ὄμματα φωτὸς
τὰ δοκοῦντ' εὔφρονος ἐκ διανοιάς
ὑδαρεῖ σαίνειν φιλότητι.

3. Derive and explain the following words:—*ἄγκαθεν, προτέλεια, τριακτήρ, ῥῦσιον, πρόδικος, ἔρμα, πτάξ, βουκολέω, τριτόσπονδος, παράσημος, καινίζω, ἐπίξηνον, θριγκόω.*

4. Explain the following terms:—*πρόλογος, πάροδος, ἐπεισόδιον, στάσιμον, ἔξοδος κόμμος.*

5. Explain the following expressions:—*προβουλόπαις ἄφερτος ἄτας—ἀντήνωρ σποδός—παλιντυχής τριβὴ βίου—ἐν ψήφῳ λέγειν—ἀπομούσως γράφεσθαι—πρόβουλος ἔμβασις ποδός.*

6. Draw a parallel between the characters of Clytæmnestra and Lady Macbeth.

Translate into Iambic verse:—

Brakenbury. Why looks your grace so heavily to-day?
Clarence. O, I have passed a miserable night,
So full of fearful dreams, of ugly sights,
That, as I am a Christian faithful man,
I would not spend another such a night,
Though 'twere to buy a world of happy days:
So full of dismal terror was the time.
Brakenbury. What was your dream, my lord? I pray you tell me.
Clarence. Methought that I had broken from the Tower,
And was embark'd to cross to Burgundy;
And in my company my brother Gloster;
Who from my cabin tempted me to walk
Upon the hatches.

Senior Greek Class.

1. Name the extant plays of Sophocles. Where is the scene of the *Philoctetes* laid, and in what year was it first represented? Of whom did the chorus consist?

2. Translate the following passages, adding such comments as you may think necessary:—

a. νῦν μὲν ἴσως γὰρ τόπον ἐσχατίαις
προσιδεῖν ἐθέλεις ὄντινα κεῖται,
δέρκου θαρσῶν·
ὅποταν δὲ μόλῃ δεινὸς ὀδίτης.
πρὸς ἐμὴν ἀεὶ χειρα προχώρων
πειρῶ τὸ παρὸν θεραπεύειν.

b. . . . . προὐφάνη κτύπος,
φωτὸς σύντροφος ὡς τειρομένου του,
ἤ που τῇδ' ἢ τῇδε τόπων.

c. εὖ γ', ὦ τέκνον· τίνος γὰρ ὧδε τὸν μέγαν
χόλον κατ' αὐτῶν ἐγκαλῶν ἐλήλυθας;

d. ἐγὼ μέν, ὦ γένεθλον Οἰταίου πατρός,
τὸ λοιπὸν ἤδη τηλόθεν τό τ' Ἴλιον
καὶ τοὺς Ἀτρείδας εἰσορῶν φυλάξομαι.

e. Ἐγὼ μὲν ἤδη καὶ πάλαι νεὼς ὁμοῦ
στείχων ἂν ἦν σοι τῆς ἐμῆς, εἰ μὴ πέλας
Ὀδυσσέα στείχοντα τὸν τ' Ἀχιλλέως
γόνον πρὸς ἡμᾶς δεῦρ' ἴοντ' ἐλεύσσομεν.

Appendix B.

Selection of Papers used at the Sessional Examinations.

3. Define the terms ἐπεισόδιον, πάροδος, ἔξοδος, στάσιμον, κόμμος; and explain the expressions χόρον δίδοναι, and θεὸς ἐκ μηχανῆς.

4. Punctuate, accentuate, and translate the following passage :—

μη δητα τουτογ' αλλα μοι τα τοξ' ελων
ταδ' ωσπερ ητου μ' αρτιως εως ανη
το πημα τουτο της νοσου το νυν παρον
σωζ αυτα και φυλασσε

5. Translate :—

HOMER, Book XVIII., vv. 490–508.

Ἐν δὲ δύω ποίησε πόλεις μερόπων ἀνθρώπων
καλάς. ἐν τῇ μέν ῥα γάμοι τ' ἔσαν εἰλαπίναι τε,
νύμφας δ' ἐκ θαλάμων δαΐδων ὕπο λαμπομενάων
ἠγίνεον ἀνὰ ἄστυ, πολὺς δ' ὑμέναιος ὀρώρει·
κοῦροι δ' ὀρχηστῆρες ἐδίνεον, ἐν δ' ἄρα τοῖσιν
αὐλοὶ φόρμιγγές τε βοὴν ἔχον· αἱ δὲ γυναῖκες
ἱστάμεναι θαύμαζον ἐπὶ προθύροισιν ἑκάστη.
λαοὶ δ' εἰν ἀγορῇ ἔσαν ἀθρόοι· ἔνθα δὲ νεῖκος
ὠρώρει, δύο δ' ἄνδρες ἐνείκεον εἵνεκα ποινῆς
ἀνδρὸς ἀποφθιμένου· ὁ μὲν εὔχετο πάντ' ἀποδοῦναι,
δήμῳ πιφαύσκων, ὁ δ' ἀναίνετο μηδὲν ἑλέσθαι·
ἄμφω δ' ἰέσθην ἐπὶ ἴστορι πεῖραρ ἑλέσθαι.
λαοὶ δ' ἀμφοτέροισιν ἐπήπυον, ἀμφὶς ἀρωγοί·
κήρυκες δ' ἄρα λαὸν ἐρήτυον· οἱ δὲ γέροντες
εἵατ' ἐπὶ ξεστοῖσι λίθοις ἱερῷ ἐνὶ κύκλῳ,
σκῆπτρα δὲ κηρύκων ἐν χέρσ' ἔχον ἠεροφώνων·
τοῖσιν ἔπειτ' ἤϊσσον. ἀμοιβηδὶς δὲ δίκαζον.
κεῖτο δ' ἄρ' ἐν μέσσοισι δύω χρυσοῖο τάλαντα,
τῷ δόμεν ὃς μετὰ τοῖσι δίκην ἰθύντατα εἴποι.

1. What is the argument of the *Iliad*, and what space of time does its action occupy? What is meant by unity of plot in a poem?

2. Insert the digamma, where necessary, in the above extract, stating your reasons for so doing.

3. Derive and explain the terms ῥαψῳδός and στιχῳδός.

4. Give the meaning and derivation of the following words:—διακριδόν, πρόθυρον, φασσόφονος, ὀλιγηπελέω, ἀοσσητήρ, ἠϋγένειος, κατενῶπα, ἄθυρμα, πολύπυρος, ἰοδόκος, ἠλίβατος.

4. Explain the following grammatical forms :—δεικανόωντο, πεφήσεται, ἄνωχθι, ἔμμορε, πεπρωμένον, πεφιδήσεται, εὐῤῥεῖος, εἱμένος ἀκαχμένος, γέντο. Distinguish between σφωέ, σφῶϊ, σφώϊν, σφῶϊν; also between ἴός, ἴος, and ἰόν; εἶπε and εἰπέ; εἶπον and εἰπόν; αἵμων and αἰμών; εἴργω and ἔργω; Ὅμηρος and ὅμηρος.

JOHN RYALL, *Examiner.*

THIRD YEAR'S AND SENIOR LATIN CLASSES.

Translate into Elegiac verse :—

But lo! from high Hymettus to the plain,
The queen of night asserts her silent reign.
No murky vapour, herald of the storm,
Hides her fair face, nor girds her glowing form;
With cornice glimmering as the moonbeams play,
There the white column greets her grateful ray,
And, bright around with quivering beams beset,
Her emblem sparkles o'er the minaret.

Translate into Latin prose:—

I can stifle any violent inclination, and oppose a torrent of anger, or the solicitations of revenge with success. Indolence is a stream which flows slowly on, but yet undermines the foundation of every virtue. A vice of a more lively nature were a more desirable tyrant than this rust of the mind, which gives a tincture of its nature to every action of one's life. It were as little hazard to be tossed in a storm, as to be thus perpetually becalmed: and it is to no purpose to have within one the seeds of a thousand good qualities, if we want the vigour and resolution necessary for the exerting them.

JUNIOR LATIN CLASS.

Translate:—

LIVY, xxiii., 6.

Hac oratione consulis dimissis redeuntibusque domum legatis unus ex his Vibius Virrius tempus venisse ait, quo Campani non agrum solum ab Romanis quondam per iniuriam ademptum recuperare, sed imperio etiam Italiæ potiri possint. Foedus enim cum Hannibale quibus velint legibus facturos; neque controversiam fore, quin, cum ipse confecto bello Hannibal victor in Africam decedat exercitumque deportet, Italiae imperium Campanis relinquatur. Haec Virrio loquenti adsensi omnes ita renuntiant legationem, uti deletum omnibus videretur nomen Romanum. Extemplo plebes ad defectionem ac pars maior senatus spectare.

HORACE—*Satires*, II., 2, 70–81.

Accipe nunc, victus tenuis quae quantaque secum
Adferat. In primis valeas bene: nam variae res
Ut noceant homini, credas, memor illius escae,
Quae simplex olim tibi sederit: at simul assis
Miscueris elixa, simul conchylia turdis,
Dulcia se in bilem vertent, stomachoque tumultum
Lenta feret pituita. Vides, ut pallidus omnis
Coena desurgat dubia? Quin corpus onustum
Hesternis vitiis animum quoque praegravat una,
Atque adfigit humo divinae particulam aurae.
Alter, ubi dicto citius curata sopori
Membra dedit, vegetus praescripta ad munia surgit.

1. Give an account of the life of Horace, and confirm your statements by quotations from his writings.
2. Derive the words *pulmentum*, *recalcitro*, *abnormis*, *austerus*, *lethargicus*, and *esurio*.
3. What is the date of the battle of Cannæ?
4. Characterize the style of Livy, and give examples.
5. Describe accurately the situation of Capua, Canusium, and Venusia.

Translate into Latin:—

I ask you to do this.
I asked you to do this.
Strive to assist me.
He is striving to govern the winds and seasons.
He warned Cæsar not to believe the Gauls.
Do not believe the Gauls.
Do not lie.
Religion warns men not to lie.

Appendix B.

Selection of Papers used at the Sessional Examinations.

It is certain that the boy is striving to learn.
I will exhort the boy to learn.
We know that virtue and vice are contrary to each other.

Translate into Latin Elegiacs:—

Nor however sometimes let me be ashamed to hold a hoe,
Or with a goad to have chidden the slow oxen,
Let it not be irksome to bring back home either a ewe-lamb in my bosom, or the offspring of a goat
Deserted, its mother having forgotten it,
I myself will plant vines, and lay out hills in order,
Which no beasts may crop, I watching them.

SENIOR LATIN CLASS.

Translate:

JUVENAL, xi., 65–81.

De Tiburtino veniet pinguissimus agro
Haedulus et toto grege mollior, inscius herbae,
Necdum ausus virgas humilis mordere salicti,
Qui plus lactis habet quam sanguinis, et montani
Asparagi, posito quos legit vilica fuso;
Grandia praeterea tortoque calentia foeno
Ova adsunt ipsis cum matribus et servatae
Parte anni, quales fuerant in vitibus, uvae,
Signinum Syriumque pirum, de corbibus isdem
Aemula Picenis et odoris mala recentis,
Nec metuenda tibi, siccatum frigore postquam
Autumnum et crudi posuere pericula succi.
Haec olim nostri iam luxuriosa senatus
Coena fuit: Curius, parvo quae legerat horto,
Ipse focis brevibus ponebat oluscula, quae nunc
Squalidus in magna fastidit compede fossor,
Qui meminit, calidae sapiat quid vulva popinae.

CICERO—*De Officiis*, I., 22, § 77.

Illud autem optimum est, in quod invadi solere ab improbis et invidis audio:

Cedant arma togae, concedat laurea laudi.

Ut enim alios omittam, nobis rem publicam gubernantibus nonne togae arma cesserunt? Neque enim periculum in re publica fuit gravius umquam nec maius otium. Ita consiliis diligentiaque nostra celeriter de manibus audacissimorum civium delapsa arma ipsa ceciderunt. Quae res igitur gesta umquam in bello tanta? qui triumphus conferendus? Licet enim mihi, Marce, fili, apud te gloriari, ad quem et hereditas huius gloriae et factorum imitatio pertinet. Mihi quidem certe vir abundans bellicis laudibus, Cn. Pompeius, multis audientibus, hoc tribuit, ut diceret frustra se triumphum tertium deportaturum fuisse, nisi meo in rem publicam beneficio ubi triumpharet esset habiturus.

1. Notice some modern imitations of Juvenal.
2. Criticise Juvenal's account of Demosthenes.
3. Describe accurately the situation of Gades, Capreæ, Minturnæ, Syene, Mycenæ, and Seriphus.
4. Quote or refer to the passages in Cicero's letters where he mentions his treatise *De Officiis*.
5. "Mediocritatem illam tenebit, quæ est inter nimium et parum, quæ placet Peripateticis."—Explain fully the allusion in these words.

Translate into Latin :—

Does not friendship stand before relationship?—Yes, certainly; but he neglected no particular of duty.

Did he then lay no traps for you?—Nay, he laid many, but I easily avoided them all.

What if a father shall endeavour to betray his country? Shall a son say nothing?—Nay, he will beseech his father not to do that.

Translate into Sapphics :—

O river, every leaf in the thick wood feels thy force, and with trembling motion confesses that thou art the lord of the valley, of the beautiful valley.

The caves answer the leaves; and the tower which long age has cemented resounds the same with accordant voice, and trembles from its lowest base.

But thy course is through beautiful fields, and in proportion as thou art deservedly called strong, so thou flowest with easy course, and with a wave bounteous to all.

THIRD YEAR'S LATIN CLASS.

Translate :—

LUCRETIUS, ii., 795–809.

Praeterea quoniam nequeunt sine luce colores
Esse, neque in lucem existunt primordia rerum,
Scire licet quam sint nullo velata colore :
Qualis enim caecis poterit color esse tenebris ?
Lumine quin ipso mutatur propterea quod
Recta aut obliqua percussus luce refulgit ;
Pluma columbarum quo pacto in sole videtur,
Quae sita cervices circum collumque coronat :
Namque alias fit uti claro sit rubra pyropo.
Interdum quodam sensu fit uti videatur
Inter curalium viridis miscere zmaragdos.
Caudaque pavonis, larga cum luce repleta est,
Consimili mutat ratione obversa colores ;
Qui quoniam quodam gignuntur luminis ictu,
Scire licet, sine eo fieri non posse putandum est.

TACITUS—*Histories*, ii., 76.

His pavoribus nutantem et alii legati amicique firmabant et Mucianus, post multos secretosque sermones iam et coram ita locutus : "omnes qui magnarum rerum consilia suscipiunt, aestimare debent an quod inchoaturi rei publicae utile, ipsis gloriosum, aut promptum effectu, aut certe non arduum sit. Simul ipse qui suadet considerandus est, adiciatne consilio periculum suum, et si fortuna coeptis adfuerit, cui summum decus adquiratur. Ego te, Vespasiane, ad imperium voco tam salutare rei publicae quam tibi magnificum. Iuxta deos in tua manu positum est. Nec speciem adulantis expaveris. A contumelia quam a laude propius fuerit post Vitellium eligi. Non adversus divi Augusti acerrimam mentem, nec adversus cautissimam Tiberii senectutem, ne contra Gai quidem aut Claudii vel Neronis fundatam longo imperio domum exsurgimus. Cessisti etiam Galbae imaginibus. Torpere ultra, et polluendam perdendamque rem publicam relinquere, sopor et ignavia videretur, etiam si tibi quam inhonesta, tam tuta servitus esset. Abiit iam et transvectum est tempus, quo posses

Appendix B.

Selection of Papers used at the Sessional Examinations.

videri concupisse: confugiendum est ad imperium. An excidit trucidatus Corbulo? Splendidior origine quam nos sumus, fateor: sed et Nero nobilitate natalium Vitellium anteibat.

1. Mention some words occurring in Lucretius which are rarely used by other writers.
2. What were the opinions of Lucretius concerning the gods?
3. How was Cybele represented by the ancient artists?
4. Describe some coins which illustrate the history of Vespasian's reign.
5. When did Tacitus flourish? Name his most celebrated contemporaries.
6. Give examples of the peculiar manner in which Tacitus uses the genitive case.

B. Lewis, *Professor.*

History.

General Questions—

1. What is history?
2. Distinguish between written and unwritten historical evidence.

European History—

3. Trace the genealogy of Charlemagne from Pepin of Landis.
4. Trace the rise and progress of the Feudal system in Europe. At what time was that system at its height?
5. What caused the decline of the Feudal System? Characterize the state of Europe in the period A.D. 1200–1500.
6. Narrate the principal events in the first three Crusades.
7. State the claim of Edward III. to the throne of France.
8. What were the leading articles in the Peace of Bretigni?
9. Give an account of the battle of Azincourt.
10. What were the terms of the Treaty of Troyes?

English History—

11. Mention the most remarkable assertions of liberty, from Magna Charta to the Act of Settlement. Discuss more particularly the Petition of Right, and the Bill of Rights.
12. Enumerate Marlborough's victories, with the dates.
13. Discuss the measures taken in reference to the Union with Scotland; mention the leading articles of the Union; and review the state of feeling in Scotland.
14. Give a brief account of the War of Succession in Spain.
15. State the arguments for and against the Treaty of Utrecht.
16. Write a short life of Warren Hastings.
17. Discuss the measures taken in reference to the Union with Ireland, and mention the leading articles of the Union.

English Language.

1. What is the testimony of Cæsar and of Tacitus respecting the early inhabitants of Britain?
2. Give some account of the Anglo-Saxon invasion of Britain. In what districts did the various invading tribes settle?
3. What was the Danelagh?
4. Describe the effects produced by the Norman Conquest of England, particularly with regard to the language of the country.

5. What was the Latin of the First and Second Periods? Give examples.

6. When did the use of the French language cease in the schools, and in the courts of law?

7. What does Robert of Gloucester say on the use of French and English, and about the classes speaking those languages in the country?

SHAKESPEARE'S "KING JOHN."

8. Explain the following passages:—

(*a.*) He hath a *trick* of Cœur-de-lion's face.

(*b.*) . . . . . my face so thin,
That in mine ear I durst not stick a rose,
Lest men should say, Look where three farthings goes!

(*c.*) Be pleased then
To pay that duty which you truly *owe*,
To him that *owes* it, namely, this young prince.

(*d.*) Imprisoned *angels*
Set at liberty.

(*e.*) Hadst not thou been by,
A fellow by the hand of nature marked,
Quoted and *signed*, to do a deed of shame,
This murder had not come into my mind.

(*f.*) Even as a form of wax
Resolveth from his figure 'gainst the fire.

ENGLISH LITERATURE.

1. Sketch the plan of Chaucer's Canterbury Tales. Remark upon the poetic genius of Chaucer.

2. Characterize the poetry of Spenser. Explain the Spenserian stanza.

3. Trace the rise and progress of the European drama. Explain the terms—*miracles, mysteries, moralities, interludes,* and *masques.*

4. Contrast the Classical and the Romantic schools in English dramatical literature.

5. Characterize the prose style of Bacon.

6. Divide Milton's literary career into three parts, giving an account of the works which he produced in each.

7. Review Dryden's satirical and didactic poems. Show that a strong point in Dryden's genius was his power of "reasoning in verse."

8. Consider Dryden and Pope as representatives of the Correct School in English poetry.

9. Review Pope's "Rape of the Lock."

10. Comment upon the following passages:—

(*a.*) If it were done, when 'tis done, then 'twere well
It were done quickly. If the assassination
Could trammel up the consequence, and catch
With his surcease, success; that but this blow
Might be the be-all and the end-all here;
But here, upon this bank and shoal of time,
We'd jump the life to come.

(*b.*) If it be so,
For Banquo's issue have I filed my mind,
For them the gracious Duncan have I murdered;
Put rancours in the vessel of my peace,

Appendix B.

Selection of Papers used at the Sessional Examinations.

Only for them; and mine eternal jewel
Given to the common enemy of man,
To make them kings, the seed of Banquo kings!
Rather than so, come, fate, into the list,
And champion me to the utterance.

(*c.*) Come, seeling night,
Scarf up the tender eye of pitiful day.

(*d.*) What man dare, I dare:
Approach thou like the rugged Russian bear,
The armed rhinoceros, or the Hyrcan tiger,
Take any shape but that, and my firm nerves
Shall never tremble; or, be alive again,
And dare me to the desert with thy sword;
If trembling I inhabit, then protest me
The baby of a girl.

WM. RUSHTON, *Professor.*

MODERN LANGUAGES.

I.

Translate into French:—

Aristides, while in exile, proved that not he, but those who banished him, were the enemies of the state; for when he ascertained that the Persian fleet was so large that the Greeks could not escape, he went over to Salamis, and reported the fact, in order that they might act to more advantage. This, however, he would never have done, had he thought more of the enmity of Themistocles than of the safety of his country. The Athenians would not permit the increase of the Spartan interest, nor the Spartans that of the Athenians; but, probably, had they known that Philip of Macedon was plotting against their liberties, they would not have suffered his power to increase, but would have combined their forces and taken the field against the common enemy.

II.

In the reign of Charles II. the coffee-houses of London were the chief organs through which the public opinion of the metropolis vented itself. Every man of the upper or middle class went daily to his coffee-house to learn the news and to discuss it. Every coffee-house had one or more orators to whose eloquence the crowd listened with admiration, and who soon became, what the journalists of our time have been called, a fourth estate of the realm. Nobody was excluded from those places who laid down his penny at the bar. Yet every rank and profession, and every shade of religious and political opinion, had its own head-quarters. There were houses near St. James's Park where fops (Gecken) congregated, their heads and shoulders covered with black or flaxen wigs, not less ample than those which are now worn by the Chancellor and by the Speaker of the House of Commons. The atmosphere was like that of a perfumer's shop. Tobacco, in any other form than that of richly scented snuff, was held in abomination. If any clown (Knote), ignorant of the usages of the house, called for a pipe, the sneers of the whole assembly and the short answers of the waiters soon convinced him that he had better go somewhere else. Nor indeed would he have had far to go, for, in general, the coffee-houses reeked with tobacco like a guard-room (Wachtstube); and strangers sometimes expressed their surprise that so many people should leave their own firesides to sit in the midst of eternal fog and stench.—*Macaulay.*

1. How do the French express such sentences as these?—He is to read.—I have just seen the queen.—The prince has just past.—You should have stopped.

2. Give the principal rules on the use of the subjunctive mood, in French, and illustrate them by examples.

3. When is the negative *ne* applied without there being a corresponding negative in English? Give examples.

4. State the use of the Imperfect and of the Preterite, in French, comparing them to the Latin. Give examples.

5. Mention some of the French Onomatopœia.

6. State what you know of the life and works of Racine.

7. Characterize his tragedy of *Athalie*.

8. Which are considered Corneille's best plays.

9. Characterize the Cid and Cinna.

10. Which are the fundamental differences between the English drama as represented by Shakespere, and that of France as represented by Corneille and Racine.

R. DE VERICOUR.

MATHEMATICS.

1. Define parallel lines. Sketch Euclid's reasoning on their elementary theory, noting particularly where the twelfth axiom appears.

2. Describe a triangle of which the sides shall be equal to three given straight lines, but any two whatever of these must be greater than the third. At what point in the construction is the above condition implied?

3. Divide a given straight line into two parts, so that the rectangle contained by the whole line and one of the parts may be equal to the square on the other part.

4. The straight line drawn at right angles to the diameter of a circle from the extremity of it falls without the circle; and no straight line can be drawn from the extremity between that straight line and the circumference so as not to cut the circle.

Chords of a circle are drawn through a fixed point inside it: prove that the middle point of the complete chord always lies on a circle (C), and that the middle points of the two segments always lie on another circle concentric with (C).

5. The sides about the equal angles of equiangular triangles are proportionals, and those which are opposite to the equal angles are homologous.

6. Prove that $x^m \div x^n = x^{m-n}$, m and n being positive integers of which m is the greater.

Prove that $(a+b+c)^3=(-a+b+c)^3+(a-b+c)^3+(a+b-c)^3+24\,abc$.

and divide x^2-8y by $x^3-\sqrt{2}x^{\frac{3}{2}}y^{\frac{3}{2}}+2y^{\frac{3}{2}}$.

7. Reduce to its lowest terms $\dfrac{2x^5-61x^2+63}{10x^6-91x^4+81}$, and add together

$$\frac{2}{x^2+x-2},\quad \frac{-3}{x^2-4},\quad \frac{5}{x^2-x-2}.$$

8. Solve the equations—

$$1^\circ.\quad \frac{x+1}{x-2}+\frac{x-2}{x+1}=\frac{x+2}{x-3}+\frac{x-3}{x+2}.$$

$$2^\circ.\quad \begin{cases} -x+2y+5z=20 \\ 3x-5y-7z=-23 \\ 4x-7y+3z=32 \end{cases}$$

$$3^\circ.\quad \begin{cases} x^4+y^4=97 \\ x-y=-1 \end{cases}$$

Appendix B. Selection of Papers used at the Sessional Examinations.

9. If $a+\sqrt{x}=b+\sqrt{y}$ where a and b are rational, and $\sqrt{x}$ and $\sqrt{y}$ surds, prove that $a=b$ and $x=y$.

Extract the square root of $1-\frac{1}{5}\sqrt{24}$.

10. Define and find the sum to n terms of a geometric series. Under what circumstances can you find a limit to the sum of an infinite number of terms of such a series.

Sum the series 1°. $\frac{5}{8}+1+\frac{11}{8}+\ldots$ to 40 terms.

2°. $1\frac{1}{2}+3\frac{1}{4}+5\frac{1}{8}+\ldots$ to n terms.

and show that $(6-2\sqrt{3})+(4\sqrt{3}-6)+(9-5\sqrt{3})+\ldots$ to $\infty=4$.

11. Prove that $\log_a b=\frac{\log_c b}{\log_c a}$

Explain the advantages possessed by the common system of logarithms for practical calculations.

Given $\left(\frac{3}{4}\right)^{\frac{100}{x}}=\frac{4}{5}$, $\log_{10} 2=\cdot 3010300$, $\log_{10} 3=\cdot 4771213$, find x correct to 3 decimal places.

12. Assuming that the circumferences of circles vary as their radii, prove that the circular unit is a definite angle.

13. Prove that $\cot(3\,.\,180°+A)=\cot A$.

If $\tan\theta=-(2\sqrt{3})$ prove that $\theta=\frac{\pi}{12}(12n+7)$. Find also the tangent of 1560°.

14. Prove that 1°. $\cos\overline{A+B}=\cos A\cos B-\sin A\sin B$.

2°. $\sin\overline{A+B}+\cos\overline{A-B}=2\cos\left(\frac{\pi}{4}-A\right)\cos\left(\frac{\pi}{4}-B\right)$

15. Prove that in any triangle $\sin A:\sin B:\sin C::a:b:c$. Illustrate geometrically the ambiguous case in the solution of triangles. Lines are drawn through the angles of a triangle, making the same angle θ with the opposite sides (θ being measured always on the same side of the lines); prove that these lines form a triangle similar to the original, and having each side to one in it as $2\cos\theta:1$.

Additional Questions to be taken into account in deciding the Prizes.

1. A straight line AB is divided in C; upon AC, CB, and on the same side of it, are described segments of circles containing angles which are supplementary; CP, drawn perpendicular to AB, meets the semicircle on AB as diameter (and on the same side of it as the two segments) in P; AP, BP, meet the segments in Q and R; prove that CQ is perpendicular to CR, and that QR touches both the segments.

2. If $a:a_1::a_1:a_2::a_2:a_3\ldots$ prove that

$$\left(\frac{a_p}{a_q}\right)^{\frac{1}{p-q}}=\left(\frac{a_r}{a_s}\right)^{\frac{1}{r-s}}$$

$$\left(\frac{a^2_p}{a^p_q}\right)^{\frac{1}{p-q}}=\left(\frac{a^s_r}{a^r_s}\right)^{\frac{1}{r-s}}$$

3. Find the coefficient of x^{2n} in the expansion of $\frac{1}{(x+2)^3(x^2+2)}$

4. If $u_n=\frac{(-1)^n 3^n \underline{/r+n-1}}{\underline{/2n}\ \underline{/r-n}}$ prove that

$u_1+u_2+u_3+\ldots+u_r=0$ if r be a multiple of 3.

$=\frac{-3}{2r}$ if it be not a multiple of 3.

5. Prove that $\sin\theta \cdot \sin\left(\frac{\pi}{5}-\theta\right) \sin\left(\frac{\pi}{5}+\theta\right) \sin\left(\frac{2\pi}{5}-\theta\right) \sin\left(\frac{2\pi}{5}+\theta\right) = \frac{1}{16}\sin 5\theta$.

C. NIVEN.

MATHEMATICS.

1. Prove that the sines of the angles of a spherical triangle are proportional to the sines of the opposite sides.

2. There are two isosceles spherical triangles; in one of them each of the equal sides is $\frac{\pi}{6}$, and the included angle $\frac{2\pi}{3}$, and in the other each of the equal sides is $\frac{\pi}{3}$, and the included angle is $\frac{\pi}{3}$; prove that the third sides are equal.

3. Find the equation to a straight line in the form $\frac{x}{a}+\frac{y}{b}=1$. Find the equation to the line joining the points $(-2,+3)$ $(0,-1)$.

4. Determine the length of, and the equation to the line through $(-1, 0)$ perpendicular to $3x-2y=5$.

Investigate what is represented by the equation $r^2+\theta^2-2cr+c^2=0$.

5. Find the equation to the chord of contact of tangents to the circle $x^2+y^2=c^2$ from the point (h,k).

6. Find the equation to the normal at any point of an ellipse.

Prove that it cuts the line joining the foci into two parts, which are as the focal distances of the point on the curve through which the normal is drawn.

7. Investigate the equations to the asymptotes of the hyperbola

$$\frac{x^2}{a^2}-\frac{y^2}{b^2}=1.$$

Prove that the eccentricity of the curve is equal to the secant of half the angle between them.

8. Define a limit; assuming the value of $\frac{x^n-1}{x-1}$ when $x=1$, deduce the differential coefficient of x^n.

Differentiate $\frac{m^2x^2-n^2}{(1-x^2)^{\frac{m}{n}}}\log(\sec x)-\sec^2 x+\frac{\sec^4 x}{4}$.

9. State and prove Leibnitz's theorem.

If $y=(\sin^{-1}x)^2$, prove that

1. $(1-x^2)\frac{d^2y}{dx^2}-x\frac{dy}{dx}=2.$

2. $(1-x^2)\frac{d^{n+2}y}{dx^{n+2}}-x(2n+1)\frac{d^{n+1}y}{dx^{n+1}}-n^2\frac{d^ny}{dx^n}=0.$

10. Investigate the conditions for maxima and minima values of $\phi(x)$. *State* the complete rule when several differential coefficients of $\phi(x)$ vanish for the same value of x which makes $\phi'(x)=0$.

If $x^3+y^3-3axy=0$, prove that

y is a maximum and $=a\sqrt[3]{4}$ when $x=a\sqrt[3]{2}$,

and that x is a maximum and $=a\sqrt[3]{4}$ when $y=a\sqrt[3]{2}$.

Appendix B.

Selection of Papers used at the Sessional Examinations.

11. Prove that the sum of the maximum and minimum values of $x^3-6x^2+3x+21$ is 22.

12. Explain the terms "*multiple point*," "*point of inflexion*," "*point of osculation*," "*rhamphoid cusp*." Find the conditions that the curve $\phi(x,y)=0$ may have a double point at (α,β), and determine the equations to the tangents at this point.

The curve $(x^2+y^2)\ (x-a)^2=4a^2x^2$ has a double point at the origin, and the tangents make angles of 60° with the axis of x.

13. Define the "*circle of curvature*" and "*evolute*."

From the expressions for the co-ordinates of the centre of curvature,

$$2\alpha\frac{d^2x}{dy^2}=\frac{d^2r^2}{dy^2},\quad 2\beta\ \frac{d^2y}{dx^2}=\frac{d^2r^2}{dx^2},$$

find them corresponding to any point of an ellipse, and deduce its evolute.

14. Prove the formula for integration by parts, and integrate

$$\frac{1}{\sqrt{a^2+x^2}},\quad \frac{2x+1}{(x+1)^2\,(x^3+1)},\quad \sec^3x.$$

15. Show that the area of a plane curve between any two radii vectores is given in general by $\frac{1}{2}\int_{\beta}^{\alpha} r^2d\theta$.

Apply this to find the area subtended at the focus of a parabola by any arc.

Additional Questions to be taken into account in deciding the Prizes.

1. On a straight line passing through the centre of an ellipse, and at equal distances from the centre, are taken two points P,P′ from which tangents are drawn to the ellipse forming a parallelogram PQP′Q′.

Prove that—

1. PP′ and QQ′ form two conjugate diameters of the ellipse.
2. The lines joining the points of contact form a parallelogram whose sides are parallel to PP′ and QQ′.
3. The product of the area of this parallelogram and that of PQP′Q′, depends only on the area of the ellipse.

2. From two points B,C on the diameter of a circle whose centre is O, lines are drawn to any point P on the circumference of the circle. Prove that when PB+PC is a minimum—

$$\mathrm{PB}=\sqrt{\frac{b}{c}\,(a^2+bc)},\quad \mathrm{PC}=\sqrt{\frac{c}{b}\,(a^2+bc)}$$

where OB=b, OC=c, OP=a. [O is supposed to lie between B and C.]

Determine also where PB+PC is a maximum.

3. A series of ellipses is drawn touching a fixed right line. They have the same centre, and their principal axes coincide in direction. Prove that the polar of a fixed point with respect to them envelopes a parabola.

4. Evaluate $\int_{\sqrt{3}}^{\infty}\frac{\cot^{-1}x}{(1+x^2)^{\frac{3}{2}}}dx$, and find the area included between the curve $\sqrt[3]{\frac{x}{a}}+\sqrt[3]{\frac{y}{b}}=1$ and the positive directions of the co-ordinate axes. Determine also the nature of the contact of the curve with the axes.

C. NIVEN.

Practical Mechanics and Theory of Steam Engines.

Prize Questions.

1. A cylinder weighing 100 lbs. turns upon a horizontal axis. Motion is communicated by a weight of 10 lbs. attached to a flexible string which is coiled round the surface of the cylinder. Find the space through which the weight will descend in ten seconds.

2. A body capable of turning on a given axis is struck by a blow at given magnitude along a line lying in a plane passing through the centre of gravity at right angles to the axis. The body being symmetrical with regard to this plane, how would you determine the impulse in the axis ?

3. Investigate the relation between the resistance and the pressure which is on the point of urging forward an isosceles wedge.

4. Determine in general the plane down which a mass of loose earth, having one face vertical, must slide in order to produce the maximum horizontal pressure.

5. A body weighing 20 lbs. is tied to the end of a string, and suspended from a point which is carried round a curve of 1,000 feet radius, at the rate of fifteen miles per hour. Find the inclination of the string to the vertical.

6. A cylinder rolls down a rough inclined plane without any sliding motion. Investigate its motion.

7. In the steam engine prove that the maximum useful effect for a given evaporation is obtained when the pressure of the steam in the cylinder is a maximum.

Pass Questions.

1. What must be the horse-power of an engine that draws a weight of 150 tons along a horizontal road at the rate of 18 miles per hour, friction being 8lbs. per ton ?

2. Assuming that the resistance of the air varies as the square of the velocity, show how to ascertain the maximum speed which a train can attain in moving down a given incline by the effect of its own weight.

3. In an ordinary roof show how to compute the horizontal strain on a tie connecting the feet of the rafters, or at any given distance from the ridge ; also explain the effect of introducing a kingpost.

4. Investigate the condition of equilibrium of the screw, taking into account friction ; also the effect of the friction on its end.

5. A wheel weighing four tons turns uniformly upon an axis whose radius is ·25 feet, and makes four revolutions per minute. Find the work consumed by friction per minute, the co-efficient of friction upon the axis being ·075.

6. A piece of iron weighing 100 lbs. is drawn along a horizontal plane of iron by means of a cord which is parallel to the plane, and to the end of which a weight of 10 lbs. is attached. Determine how far it will move in four seconds, friction of iron on iron = ·16.

7. Define the following terms : " moment of inertia," " radius of gyration," " centre of percussion."

8. Show how to estimate the amount of work accumulated in a given fly-wheel rotating with a given angular velocity.

9. Show how to determine the following quantities :—1. The volume of steam which can be got from a given quantity of water. 2. The amount of heat necessary to evaporate a given quantity of water.

10. Why does not Muriotte's law apply to the steam in its passage through the engine.

Appendix B. Selection of Papers used at the Sessional Examinations.

11. Prove the following:—$av = \varepsilon \mu_p S$.

12. In a locomotive how would you compute the resistance on the piston, knowing the resistance to the motion of the engine.

THIRD YEAR ENGINEERING—MATHEMATICAL PHYSICS.

1. Deduce the formula for determining the resultant of a system of parallel forces in the same plane, and thence establish the conditions of equilibrium of such a system.

2. A uniform rod rests wholly within a rough hemisphere in a vertical plane through its centre, prove that the limiting position of equilibrium is given by the equation $\tan\theta = \dfrac{\sin 2\phi}{2\cos(\beta+\phi)\cos(\beta-\phi)}$ where 2β is the angle it subtends at the centre, and ϕ the angle of friction.

3. Two inclined planes are placed back to back, two weights P and Q are placed on them connected by a string passing over the common vertex, find the relation between P and Q when in equilibrium, also the tension on the string, when there is not equilibrium.

4. With what velocity must a body be projected vertically upwards to rise to a height of 400 feet in two seconds?

5. A body is projected from a given point with a given velocity, determine the angle of projection in order that it should strike a given point.

6. Two balls whose elasticity is $\frac{5}{6}$, and masses as 2 : 1, move in opposite directions with velocities which are as 1 : 2; find the ratio of their velocities after impact, to what they were before.

7. A rectangle is immersed in a fluid so that two of its edges are parallel to the surface, and are at given depths below it; find the centre of pressure.

8. A pencil of light is incident directly on a plane refracting surface; prove that the ray which meets the surface at a distance y from the axis, if prolonged after refraction would meet the axis is given by the formula $v = \mu u + \dfrac{\mu^2-1}{\mu}\dfrac{y^2}{2u}$

9. At what distance from a convex lens must an object be placed that the image $= \frac{1}{4}$ object.

10. Find the sun's declination when for a place in a given latitude his mid-day altitude is known.

11. How would you determine the parts of the earth at which a given lunar eclipse would be visible, knowing the moon's declination and the Greenwich time at the beginning and ending of the eclipse.

12. Knowing the declination of a star and its altitude when in the prime vertical, determine the latitude of the place of observation.

Prize Questions.

1. Determine the centre of gravity of the portion of the area of the curve $y = \sin x$, between $x = o$, and $x = \pi$.

2. If the frustrum of a cone be bisected by a plane through its axis, prove that either half will just stand upon the smaller end on a horizontal plane if $\dfrac{h+h'}{h} = \pi\dfrac{h^2+hh'+h'^2}{h^2+h'^2}$ where h and h' are the heights of the smaller and larger cones, the difference of which constitutes the frustrum.

3. Investigate the form of a flexible string under the action of a central force.

4. A particle is placed at a given distance from a uniform thin plate of indefinite extent, every particle of which attracts with a force varying inversely as the square of the distance; find the time in which the particle will arrive at the surface of the plate.

5. A particle describes a curve about a centre of force, its velocity varies $\frac{1}{r^n}$; find the law of force.

6. Prove that time of a particle's sliding down any arc of a curve is given by the formula $t = \int_0^{y_1} \frac{\frac{ds^1}{dy}\, dy}{\sqrt{2g\,(y_1 - y)}}$

7. Investigate the form of the surface of a fluid mass rotating round any axis, and acted on by any forces.

8. Find the least distance between an object and its image formed by a convex lens.

9. Prove that in a lens chromatic aberration $= \frac{\pi v^2}{f}$ where π is dispersive power.

10. If r be the horizontal refraction, prove that the azimuth of the sun when rising is altered by it through a quantity $\frac{\sin \phi \cdot r}{\sqrt{\cos(\phi - \delta)\cos(\phi + \delta)}}$

11. If σ an σ' be the semi-vertical angles of the curves of the earth's shadow and penumbra, and θ the sun's apparent semi-diameter, prove that $2 \tan \theta = \tan \sigma + \tan \sigma' \sigma'$.

12. From the geocentric latitude and longitude of a planet, show how to deduce the heliocentric.

Natural Philosophy (Junior).

1. Find the common centre of gravity of three equal weights suspended from the vertices of a given triangle.

2. A rod 30 inches long rests in a horizontal position between two pegs, of which one is at the end, a weight of 5 pounds is suspended at the other end, find the position of the second peg in order that the pressure on it may be 15 lbs.

3. How would you determine the height to which a body would ascend when projected vertically upwards in vacuo?

4. A cube floating in water sinks to three-fourths of its depth, to what depth will it sink in mercury if the specific gravity of mercury be 13.

5. An object is held opposite a convex lens, at a distance equal to four times its focal length, determine the nature and position of its image.

6. Describe the several parts of the eye, and illustrate by a figure the refraction of a pencil of rays entering it.

7. How is it proved that sound is produced by the vibrations of ponderable matter?

8. What is meant by a unit of heat? if the specific heat of a substance be ·11 how many units of heat would be necessary to raise 20 lbs. of it through 150°.

9. How is it proved experimentally that solid bodies expand on an increase of temperature?

10. Why do metals at the ordinary temperature feel cold?

11. What is meant by a diamagnetic substance?

12. Give an outline of the process of electrotyping.

Appendix B.

Selection of Papers used at the Sessional Examinations.

NATURAL PHILOSOPHY (SENIOR).

1. How with a dipping needle alone could you determine the magnetic meridian, and true dip?

2. How would you determine the magnetic axis of a bar?

3. Describe accurately the several parts of the Induction Coil.

4. Explain the principle of the sine galvanometer.

5. How do you explain the current air which proceeds from a point attached to the conductor of an electrical machine when in action?

6. Describe some method of determining the number of vibrations of air which produce a certain musical tone.

7. Write down the numerical relations which subsist between the several notes of the gamut.

8. How would you deduce the change of volume of a gas caused by a simultaneous change in its pressure and temperature?

9. How does the latent heat of steam vary with its temperature?

10. What relation exists between the absorbing and reflecting powers of different bodies?

11. How is it experimentally proved that some crystallized bodies transmit heat differently in different directions?

12. Describe the Thermo-electric pile.

Prize Questions.

1. How does the pitch of an organ-pipe vary with the temperature? give the reason for your answer.

2. A plate and string vibrating in the same time produce tones of the same pitch but of different quality, how is this explained?

3. Describe the method of determining the dew-point of the wet bulb thermometer, and hence show how to get the coefficient of saturation of the air.

4. Describe Joule's method of determining the mechanical equivalent of Heat.

5. The specific Heat of a gas at a constant volume is different from its specific Heat at a constant pressure. Why so?

6. Describe some experiment to show the apparent radiation of cold, give an explanation of it.

7. Describe and explain the means by which water has been frozen in a red-hot vessel.

8. A copper helix, through which a Voltaic current is passing, is suspended so as to have free motion in a horizontal plane, describe accurately the position it will assume.

9. What is meant by the equivalent length of a circuit? How can we determine it when the lengths, sections, and conducting powers of its several parts are known.

10. A current of known intensity passes simultaneously through several conductors, how would you determine the intensity in each part.

NATURAL PHILOSOPHY.

1. If two forces be represented by two sides of a triangle, their resultant will be represented by twice the line drawn from their intersection to bisect the third side.

2. A weight of 20 lbs. is attached to a string, one extremity of which is fixed, what horizontal force must be applied to the weight in order that the string should make an angle of 30° with the vertical?

3. A uniform rod rests with its extremities on two props, at what point of it must a weight equal to its own weight be suspended in order that

the pressure on the props should be in the ratio of 2 : 1 ; the length of the rod being 60 inches ?

4. A particle falls from rest, find the space described in the last three seconds of a fall through a height of 330 feet.

5. Prove that the centrifugal force on a body moving in a circle is given by the formula $f=\frac{v^2}{r}$.

6. A cylinder of iron, 12 inches in length, is placed in a vessel of mercury, with its axis vertical, to what depth will it sink, the specific gravity of iron being 7·2 that of mercury 13·6 ?

7. State and prove the rule for determining the pressure in a plane surface immersed in a fluid.

8. Is Venus a morning or an evening star shortly before being in inferior conjunction, what phase does she then present ?

9. Explain and prove the rule for determining the latitude by the meridian transits of a circumpolar star, and show how to correct for refraction.

10. What must be the relation between the following elements in order that a lunar eclipse may be total, viz. :—The angular distance of the centre of the moon and centre of the earth's shadow, the moon's apparent semidiameter and horizontal parallax, the sun's apparent semidiameter and horizontal parallax ?

11. Explain the construction of Newton's reflecting telescope and prove the rule for ascertaining its magnifying power.

12. Prove that the deviation produced by a prism with a small refracting angle is given by the following formula, viz. :—$\delta=(\mu-1)\epsilon$.

Prize Questions.

1. Assuming the rule for the composition of forces acting at a point, prove that for the composition of parallel forces.

2. Define a couple. Explain what is meant by its moment, and prove that two couples in the same plane will equilibrate if their moments be equal and opposite.

3. If a heavy body be made to describe a circle on the deck of a ship, the common centre of gravity will describe a circle.

4. Prove that the path of a projectile in vacuo is a parabola.

5. How long must a force of 100 ozs. act on a body weighing 100 lbs. to impress on it a velocity of 5 yards per second ?

6. A seconds pendulum is carried to the top of a mountain, and there is found to lose one minute per day, what is the height of the mountain ?

7. A U tube, closed at one end, is filled with air, mercury is poured into it until it stands at the height of 6 inches in each of the vertical arms, a column of water, 80 inches in length, is then poured into the open arm, to what height will the mercury rise in the closed side ?

8. Show how the truth of Kepler's first two laws can be established in the case of the earth, from observing at intervals the sun's apparent diameter and longitude.

9. Given the right ascension and declination of a star, and the obliquity of the ecliptic, calculate its latitude and longitude.

10. Explain how the relative distances of a planet and the earth from the sun can be computed.

11. In a spherical reflector, prove that the focal length is a mean proportional between the distances of the radiant and its conjugate from the principle focus.

12. Derive a formula for the focal length of a lens formed by cementing together two lenses of different focal lengths.

JOHN ENGLAND.

Appendix B.

Selection of Papers used at the Sessional Examinations.

Chemistry.

Pass Questions.

N.B.—The name and faculty of each student are to be written on the first page of each book.

Answers to any fifteen questions will be regarded as sufficient for the pass examination.

1. Give examples of monad, dyad, triad, and tetrad metalloids and metals. Write their symbols with the indications of their atomicities.

2. Name the following compounds—

H_2S, N_2O, CH_4, KHO, CoH_2O_2, $KHCO_3$, $NaHSO_3$, $Ca2NO_3$.

3. Give examples in symbols illustrative of simple and of double decomposition.

4. Illustrate the processes of oxidation and of deoxidation by different modes of preparing sulphurous acid. Give its composition in weight and in volume, and its properties.

5. Give the formulae and the properties of the compounds produced by the action of nitric acid on copper.

6. Prepare phosphoric acid from bones. Write the formula of the hydrated tribasic acid, and mention the best test for its soluble salts.

7. Sulphuric acid is deoxidised by carbon, write out in symbols the reactions.

8. Illustrate combination by volume in the formation of water, sulphuretted hydrogen, ammonia, nitrous oxide, and hydrochloric acid.

9. Prepare carbonic oxide from ferrocyanide of potassium. Give the composition by weight and by volume, and the properties of this gas.

10. Write the formulae of the oxides, and of the hydrates of potassium, calcium, barium, and of the salts which they form with nitric and sulphuric acids.

11. What is meant by an anhydride? Give examples.

12. What is the present notion of an acid and of a salt? Give examples in symbols of normal salts formed by the union of a monad with a polybasic acid, and of a dyad with a monobasic acid.

13. Prepare carbonate of sodium from the chloride.

14. Describe shortly the metallurgy of zinc.

15. Salts of silver, copper, manganese, and lime are in the same solution, what would be the effect of adding, in the following order—

1st, HCl; 2nd, H_2S; 3rd, $(NH_4)_2S$; 4th, $(NH_4)_2CO_3$?

16. Write the formulae of the oxides of copper. State what effect is produced in a solution of sulphate of copper by caustic potash, and grape sugar by the aid of heat.

17. Give some examples of oxides which are isomorphous.

18. Nascent hydrogen acts on antimonial compounds, state what gas is formed; how would you distinguish it from the similar compound formed from arsenical preparations under the same circumstances.

19. Prepare the two oxides of mercury, and the corresponding chlorides.

20. To what crystalline system does the rhombic dodecahedron belong? What are the notations of the axes of this system?

21. Prepare oxygen by means of oxide of barium. Mark its atomicity. How is it changed into allotropic oxygen?

22. What is the water type? Illustrate it by the formation of anhydrous and of hydrated oxide of sodium on this type.

23. In the combustion of nitrogenized organic bodies with oxide of copper an error is apt to be caused, in estimating the quantity of carbon, by the production of a certain gas. State what gas it is, and how you would prevent its formation.

24. Ten grains of an organic substance give on combustion with oxide of copper 16·28 grains of carbonic anhydride, calculate the percentage of carbon.

$$\text{C}=12$$
$$\text{O}=16$$

25. State generally the method of ascertaining the atomic weight of an organic acid.

Chemistry.

Prize Questions.

N.B.—The name and faculty of each student are to be written on the first page of each book.

1. Point out the distinction between a molecule and an atom. Give the molecular and the atomic weights of hydrogen and of ammonia.

2. Give examples of the monatomic and polyatomic elements. Show by graphic notation what is meant by absolute, latent, and active atomicities. Illustrate in the same manner a saturated and a non-saturated compound.

3. Show that hydrosulphuric acid is the analogue of water. Point out by symbols the similarity of constitution of hydrosulphate of ammonium, of hydrate of potash.

4. What compounds of phosphorus are known in the anhydrous form? State how they are prepared both in the anhydrous and the hydrated form.

5. Prepare selenium. Contrast its compounds with those of another element which it closely resembles.

6. Contrast the old views of the constitution of acids and of salts with those which are now generally adopted. Write the formulae of some normal acid, and basic salts on both views.

7. Name the metals whose salts are not precipitated from an acid solution by sulphuretted hydrogen. Show by symbols why this gas when passed into neutral persulphate of iron does not cause any percipitation of the metal. Point out what really takes place.

8. Given the sulphate of barium, prepare from it the hydrated oxide. State in what manner oxygen gas may be obtained by means of this oxide.

9. With what oxide is alumina isomorphous? Illustrate isomorphism by the formulae of different alums.

10. In what state is bismuth generally found in nature? Give the formulae of its oxide, chloride, sulphide, and nitrate. What effect has water on the last two compounds, and how would you distinguish the products in this case from the similar one formed from chloride of antimony by water.

11. How is white percipitate prepared? What is its constitution according to the old and new views? How would you detect the presence of the different bodies which enter into its composition.

12. How is metallic platinum obtained from its ores? Mention some of its properties. Give the formulae of its oxides and chlorides, and of the double salts which the latter form with potassium and ammonium.

13. Derive $a : a : \infty c$ from $a : \infty a : c$, and $a : \infty a : \infty c$ from $a : a : c$. Name the figures.

14. What is the distinction between the combining quantity and the molecular weight of an organic compound? How is the former obtained? By what means would you arrive at a knowledge of the latter?

15. One hundred grains of the double salt of nicotine and of platinum

Appendix B. Selection of Papers used at the Sessional Examinations.

contain 34·17 grains of metallic platinum, calculate the atomic weight of the alkaloid.

Pt=107·5
Cl= 35·5

J. Blyth, M.D., *Professor.*

Zoology and Botany.

1. Name the orders of the class Echinodermata.
2. Define, as nearly as possible, the class Crustacea.
3. What animals belong to the group of Molluscoida? How do these differ from Mollusca, in the stricter sense?
4. Compare selachians with true osseous fishes (Teleostei).
5. Give the dental formula of the horse.

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6. Not some of the more striking modifications of foliage seen among the British Umbelliferæ.
7. Describe the fruit of any umbelliferous plant.
8. Describe the flower of wheat or any other grass.
9. Compare the flowers of Ranunculus and Aconitum.
10. Give the characters of the order Scrophularineæ.

J. Reay Greene.

Geology and Mineralogy.

1. What are the agencies which alter the outline of the earth's crust?
2. In what kinds of rocks do fossils occur; and of what value are fossils in connexion with geology?
3. Give a section showing *Anticlinal* and *Synclinal axes;* also one showing *unconformability*, and define these terms.
4. What areas in Ireland afford Metamorphic Rocks; and what are the several kinds of Metamorphic Rocks in these areas?
5. What is the earliest genus of Trilobites; and what is the position and name of the rocks which contain this genus?
6. What is the mineral nature of the strata known as the Carboniferous slate of Ireland; and name some of the most characteristic fossils of these strata?
7. What deposits in the British Isles afford Rock Salt; and with what kinds of rock is this substance usually associated?
8. What is the British representation of the Neocomian group of the Continental Geologists?
9. Name the strata which form the middle Eocene group as this occurs in the Isle of Wight, and state some of the characteristic fossils thereof?
10. What is nature of the Flora, as regards climate, of the Miocene Formation?
11. To what family of minerals do Agates belong, and what are their characters and composition?
12. Where, and in what condition does Platina occur?
13. In what respect do Red Iron Ore (Hœmatite) and Brown Iron Ore (Limonite) differ from each other?

Robert Harkness.

Equity.

1. In what class of cases have Courts of Equity exclusive jurisdiction; and in what class of cases do they disclaim to have any?

2. Enumerate the "General Maxims" of Equity Jurisprudence?

3. Define the kind of "mistake" to rectify which a Court of Equity will grant relief?

4. What is a *donatio mortis causâ?* In what particulars does it differ from, and in what does it resemble a legacy?

5. How are trusts classified? What trusts must be evidenced by a writing declaratory of the trusts?

6. How do Courts of Equity regard things covenanted or agreed to be done? and what is essential in such cases to the creation of a constructive trust?

7. What is the effect of a stipulation that a mortgagee shall receive interest on the mortgage debt at £4 per cent., and that if the interest be not duly and regularly paid on the days appointed for the payment he shall be entitled to interest at the rate of £6 per cent?

8. What remedy has a mortgagee in Equity to enforce payment of the mortgage debt? and what is the relief to which a mortgager is entitled?

9. How are injunctions classified?

10. For what kind of debts will a writ of *Ne exeat regno* be issued?

Real Property and Principles of Conveyancing.

1. What is the nature of the interest which a lessee or a person who has taken a lease of lands or houses for a term of years has in the property comprised in the lease?

2. Explain "general occupancy" at common law. By what statute were the evils incident to general occupancy removed? What is meant by "a special occupant?"

3. Is there any, and if so, what difference in the barring of an estate tail and an estate "in quasi entail," in lands held for lives renewable for ever?

4. What word is indispensably necessary in a Conveyance to create an estate in fee-simple? to create an estate in tail special? and do those words confer any actual estate upon any other person than the Grantee, and if not, for what reason?

5. Distinguish between tenants holding in "severalty," "joint tenancy," and "tenancy in common," and what are the four "unities" of a joint tenancy?

6. Lands are conveyed to A and B (husband and wife), and to C, a third person, and their heirs—what proportion of the lands are they respectively entitled to hold?

7. If an estate be held *by entireties,* what parties are necessary to a conveyance of the inheritance, and what forms are necessary for the due completion of the Deed of Conveyance?

8. Why are estates in reversion and remainder said to *lie in grant?*

9. Give an outline of an ordinary Purchase Deed, observing the order and formalities observed in approved precedents.

10. Why was a Conveyance by way of "Lease and Release" said to be an *innocent* Conveyance? How did the lease or bargain and sale for a year operate to vest the legal possession of the land demised in the lessee for a year? What kind of Deed is now used to convey inheritances whether corporeal or incorporeal?

11. For what purpose is attestation of a Deed by a subscribing witness indispensable?

Appendix B.

Selection of Papers used at the Sessional Examinations.

12. How may executory estates in land be created? and in what respect do executory interests differ essentially from contingent remainders?

13. How are hereditaments purely incorporeal classified? To what class does a rent-charge belong?

14. Give an instance of a surrender in law of a lease, and of an assignment of a lease by operation of law?

15. In what manner may a power of appointment by will be properly exercised?

16. Give an instance of a Covenant implied by law?

17. What is the supposed origin of the rule that a good title to lands should be made for a period of sixty years back?

Personal Property and Contracts.

1. How are the subjects of personal property chiefly distinguished from real property?

2. How are contracts classified?

3. What are the requisites for an effectual sale of goods of the value of £10 or upwards?

4. Under what circumstances has a vendor of goods a right to resume their possession after he had parted it under a contract of sale—what is such right called, and how may it be lost? What effect has the exercise of such right on the contract for sale?

5. How many persons may be joint owners of a ship, and into how many shares may the property in a ship be divided?

6. State the rules of law with respect to the appropriation of payments where more than one debt is due.

7. What is meant by *Consols*, and of what kind of property do they consist?

8. Define copyright, and state how long may the property in copyright endure.

9. What are bottomry and respondentia?

10. In the construction of contracts, what is the distinction taken between matter of express warranty and of representation merely?

11. What is requisite to entitle a party to recover money by virtue of a policy of insurance against loss by fire—and to what extent can the claim be sustained?

12. How are legacies classified? and how may a legacy be adeemed? Give an instance where a legacy does not lapse, although the legatee may die in the testator's lifetime.

13. What formalities are prescribed by statute to render a bill of sale of chattels valid against execution creditors of the assignor?

14. What is the distinction between an executor and an administrator? and give instances of limited administrations?

15. How is the distribution of an intestate's effects regulated?

16. What formalities are requisite to enable a married woman to dispose of her reversionary interest in personal property to which she may be entitled?

17. Within what period of time must actions for the recovery of debts, detinue, or replevin, be bought, and how far is the time affected by the nature of the debt, or the security for it?

Professor Barry, *Examiner.*

Anatomy and Physiology.

1. Give an account of the nature and use of areolar tissue.
2. What are the microscopic features of adipose tissue?
3. Describe the microscopic features of voluntary muscular fibre.
4. Describe the fibro-cartilaginous tissue.
5. Describe the interior of the right auricle of the heart.
6. Describe the arytenoid cartilages and the vocal cords.
7. How are the spinal nerves connected with the cord, and how do they proceed from it in the cervical, dorsal, and lumbar regions?
8. Describe the changes in the state of the air and blood produced by the respiratory process.
9. Describe the impulse and sounds which accompany the action of the heart.
10. Describe the position and connexions of the pancreatic gland.
11. Describe the transverse arch of the colon and its visceral relations.
12. Describe the cortical part of the kidney and the Malpighian bodies.

Practical Anatomy.

1. Describe the shaft and articular extremities of the clavicle; also mention precisely the attachments of muscles and ligaments to this bone.
2. Describe the head, neck, shaft, and lower end of the fibula; state the connexions of ligaments and muscles with this bone.
3. State the origin, insertion, and relations of the pyriformis muscle.
4. Describe the origin, insertion, and relations of the gluteus medius muscle.
5. Describe the course and relations of the axillary artery; mention the branches of this vessel.
6. State the origin, course, and relations of the internal epigastric artery.
7. Describe the lumbar plexus of nerves, and mention its branches.
8. Describe the connexions of the thyroid body and the thyroid arteries.
9. State the connexions of the vesica urinaria in the male subject.
10. Mention the connexions of the submaxillary gland.

J. H. Corbett.

Prize and Sessional Examination, 1867–68.

1. What are the changes effected in the local blastema as the result of inflammation?
2. What are the changes in the textural elements themselves?
3. Describe Rokitansky's and Virchow's doctrines, as to the origin of pus.
4. Describe the process of ulceration and that of gangrene, and how do they differ?
5. Detail the different forms of erysipelas, its pathology, and the various methods of treatment adapted for each of its stages.
6. Relate the different kinds of hemorrhage, their causes, symptoms, and treatment.
7. How would you distinguish dislocation of the hip on the dorsum ilii from intracapsular fracture of the neck of the femur? and describe the symptoms of each, and the treatment.

Appendix B.

Selection of Papers used at the Sessional Examinations.

8. Describe the symptoms of strangulated inguinal hernia, the different methods of treatment, and the operation for the irreducible form.

9. Relate the different kinds of cataract, their pathology, and the operations suited for each, especially that of linear extraction, as adopted by Gräfe.

JAMES TANNER, Professor of Surgery.

MEDICAL JURISPRUDENCE (LEGAL PART.)

1. Upon what two grounds is "hearsay evidence" excluded by the law of England?

2. In what manner may questions be properly framed in the cross-examination of a witness, as distinguished from the direct; and what kind of questions are properly put on re-examination?

3. How far may experts or skilled witnesses corroborate their opinions by reference to works of authority on the subject of their examination?

4. What is the Medico-legal definition of a wound? Describe what is meant in law by a "maim," "a grievous bodily harm," and a "disabling," respectively.

5. To complete the crime of "murder," how soon after the injury must the death have taken place?

6. What, in your opinion, may be fairly reported to be an "Insurable life"? To render the life of a party insurable, to what extent should he appear to be free from disorders which tend to shorten life?

7. What are the forms necessary for the valid execution of a will? What may be regarded as about the best criterion of the existence of a testable capacity at the time of the execution of a will?

8. What is indispensably necessary to entitle a witness under examination to refresh his memory by reference to written memoranda?

PROFESSOR BARRY, *Examiner.*

MEDICAL JURISPRUDENCE.

1. An individual is discovered suspended by the neck. On inspection, the body is found to be free from injuries; opium is detected in the stomach; from what signs would you conclude that this was a case of suicide, and not of poisoning by opium and suspension of the body after death?

2. A body is found in a room with a bloody knife beside it. Between the fourth and fifth ribs on the right side is observed a penetrating wound, the direction of which is backwards, slightly upwards, and to the right; prussic acid is detected in the stomach; state all the circumstances which would lead you to conclude that the wound was not suicidal.

3. State shortly the characteristic features of amentia, dementia, and mania.

4. State the different modes of death in cases of drowning. Describe briefly the mode of treatment to be adopted.

5. Contrast the progress of the symptoms in transmitre tetanus, and in poisoning by strychnine. State the most frequent *post mortem* condition of the heart in the two cases.

6. Describe the symptoms, treatment, and *post mortem* appearance of poisoning by morphia. How would you detect it by Stas' method.

J. BLYTH.

Midwifery.

1. Describe the female urethra, its structure, direction, and relations to neighbouring parts. Describe also the mode of introducing the catheter.

2. What is the amnion; how is it formed, and what are its uses? Describe its relations to the chorion in early and in late pregnancy. How is it circumstanced with regard to the umbilical vessels?

3. Detail the phenomena of a normal menstruation, giving the characters of the menstrual fluid. What are the determining causes of its occurrence; and what is its value as a sign of pregnancy?

4. Give an outline of the structure and formation of the maternal portion of the placenta. How is the blood conveyed to and from it; and how is this blood circumstanced in relation to that of the fœtus?

5. Describe the most usual symptoms of an abortion. What are the local conditions which immediately give rise to the symptoms? Mention the principal points which would guide you in your treatment.

6. The fœtal head is entering the pelvis in the second position of Nægele. Detail the successive steps of its entrance, progress, and exit, until the child is born. Where would you expect to hear the pulsation of the fœtal heart in this case?

7. Give the symptoms, mechanism, and management of a footling presentation.

8. Enumerate the chief conditions in a difficult labour in which you would consider the use of the forceps indicated. What sort of instrument would you use when the head is still pretty high up in the cavity? Describe the steps of their application in this case.

9. The membranes have ruptured, and the umbilical cord has prolapsed in a labour otherwise natural; and it is still pulsating. Give an account of the several expedients you would have recourse to, so as to give the child the best chance of life.

10. In a case of placenta prævia, where the placenta is partially attached over the os uteri; with considerable hæmorrhage, good pains, and os but little dilated; what would be your immediate line of treatment, and what ulterior management may be required?

J. R. Harvey, A.B., M.D., *Professor.*

Medicine.

1. Relate some of the leading symptoms of hysteria. State the cause of the disease and the period of life of its commencement and termination.

2. What disease or diseases is it most likely to be confounded with, and the diagnostic marks in each case?

3. At what period of life do neuralgic affections most occur? State the cause of this preference.

4. What are the usual divisions of epilepsy and the grounds of such divisions?

5. What are the symptoms and cause of facial paralysis? What would induce you to give an unfavourable prognosis?

6. Why are apoplectic seizures to be expected in a case of cerebral softening? Why are second attacks of apoplexy likely to supervene on a first?

7. Describe the progress of a single pustule in a case of variola, from its commencement to its termination.

8. What are the chief points of distinction between typhus and typhoid fever?

9. State the causes which produce malaria and favour its spread.

Appendix B.

Selection Papers used at the Sessional Examinations.

10. Describe the progressive changes produced by inflammation in a serous membrane, and the effects on the principal organs lined by it, namely, brain, lungs, heart, and peritoneum.

11. What is the relation as to cause and effect between diseases of the stomach and liver?

DENIS C. O'CONNOR, *Professor.*

MATERIA MEDICA.

Pass Questions.

1. Opium; physiological action, therapeutical uses, preparations, their doses and modes of administration.

2. Tartar emetic; same particulars, with tests of impurities.

3. Aloes; active principle, action, uses, advantages and disadvantages, with modes of correcting latter.

4. Turpentine; action and uses.

5. Sulphate of magnesia; same particulars.

6. Iron; general action and therapeutical applications.

Prize Questions.

1. Petrowsky's conclusions as to the effects of iron.

2. Adulterations of iodide of potassium, and modes of detecting them.

3. What are the constituents of opium, and how do they differ in action?

4. Give the therapeutical division of cathartics, mode of action of each class, and therapeutical applications.

5. What are the modes of ascertaining the action of remedies? What the relative value of each?

N.B.—Pass questions to be answered first.

PURCELL O'LEARY, *Professor.*

Appendix C.

List of the Students who obtained Honors or Prizes at the Sessional Examinations.

APPENDIX C.

LIST of the STUDENTS who obtained HONORS or PRIZES at the SESSIONAL EXAMINATIONS held in June, 1868.

GREEK (Third Year).
- Joseph O'Brien, . . . 1st.
- Maurice Daly, . . . 2nd.

GREEK (Senior).
- Michael Finucane, . . 1st.

GREEK (Junior).
- Robert Burgess, . . . 1st.
- Charles Harvey, . . . 2nd.
- Patrick Concannon, . . 3rd.
- Philip Benson, . . . 4th.

LATIN (Third Year).
- Joseph O'Brien, . . . 1st.
- Maurice Daly, . . . 2nd.

LATIN (Senior).
- Michael Finucane, . . 1st.
- James Magill, . . . 2nd.

LATIN (Junior).
- Philip Benson, . . . 1st.
- Timothy Nevil, . . . 2nd.
- Robert Burgess, . . . 2nd.
- Charles Harvey, . . . 4th.

MATHEMATICS (Senior).
- Thomas Horan, . . . 1st.
- Benjamin Parkes, . . 2nd.
- James Moran, . . . 3rd.

HISTORY.
- Charles Crookshanks, . . 1st.

ENGLISH LANGUAGE.
- Daniel Wilson, . . . 1st.
- Walter Dunn, . . . 2nd.
- Patrick Concannon, . . 3rd.

ENGLISH LITERATURE.
- Joseph O'Brien, . . . 1st.
- Charles Crookshanks, . . 2nd.

MATHEMATICAL PHYSICS.
- Roderick W. Kane, . . 1st.

EXPERIMENTAL PHYSICS.
- Roderick W. Kane, . . 1st.

NATURAL PHILOSOPHY.
- Thomas Horan, . . . 1st.
- Benjamin Parkes, . . 2nd.

LIST of STUDENTS who obtained HONORS or PRIZES—*continued.* *Appendix C.*

List of the Students who obtained Honors or Prizes at the Sessional Examinations.

NATURAL PHILOSOPHY (Medical).
John Burke, . . . 1st.
James Hurley, . . . 2nd.
Francis Tuohy, . . . 3rd.

GEOLOGY AND MINERALOGY.
John Taylor, . . .
Francis Fair, . . .
George Horan, . . .

FRENCH (Junior).
Walter Dunne, . . . 1st.
Charles Harvey, . . . 2nd.
Edward Shipsey, . . . 3rd.

FRENCH (Medical).
Joseph Wilson, . . . 1st.
John Bourke, . . . 2nd.
William Nealon, . . . 3rd.
James Hurley, . . . 4th.

ENGINEERING (2nd year.)
Benjamin Parkes, . . 1st.
James Moran, . . } 2nd.
Alfred Dann, . . }

CHEMISTRY.
John Burke, . . . 1st.
Francis Tuohy, . . . 2nd.
Charles Haines, . . . 3rd.
Augustin O'Connor, . . 4th.
Benjamin Parkes, . . 5th.
John Mahony, . . . 6th.

NATURAL HISTORY.
Richard Henry, . . } 1st.
Joseph Wilson, . . }

POLITICAL ECONOMY.
Matthew J. Bourke, . . 1st.
Charles Crookshanks, . . 2nd.

LOGIC.
Michael Finucane, . . 1st.

METAPHYSICS.
Thomas Rearden, . . 1st.
Mathew J. Bourke, . } 2nd.
Charles Crookshanks, . }

LAW, ENGLISH (2nd year).
Cornelius Curtin, . . 1st.

LAW, ENGLISH (1st year).
Stephen Ronan, . . . 1st.

LAW, CIVIL (2nd year).
Cornelius Curtin, . . 1st.

LAW, CIVIL (1st year).
William Taylor, . . } 1st.
Stephen Ronan, . . }

MEDICINE.

ANATOMY AND PHYSIOLOGY (1st year).
Francis Tuohy, . . . 1st.
Augustin O'Connor, . . 2nd.
John Burke, . . . 3rd.
Richard Ryan, . . . 4th.
George Vickery, . . . 5th.

ANATOMY AND PHYSIOLOGY (2nd year).
John O'Neill, . . . 1st.
James C. Holland, . . 2nd.

MATERIA MEDICA.
John O'Neill, . . . 1st.

PRACTICAL CHEMISTRY.
John O'Neill, . . . 1st.
David W. O'Connor, . . 2nd.
Jeremiah M'Craith, . } 3rd.
Henry Pearde, . . }

SURGERY.
Alexander S. Merrick, . . 1st.
Matthew M. O'Connell, . 2nd.

MIDWIFERY.
Alexander S. Merrick, . 1st.
Matthew M. O'Connell, . 2nd.
John F. Enright, . . 3rd.
Philip Cogan, . . . 4th.

PRACTICAL ANATOMY.
Matthew M. O'Connell, . 1st.
Alexander S. Merrick, . 2nd.
Michael Kearney, . . 3rd.
Philip Cogan, . . . 4th.

MEDICAL JURISPRUDENCE.
John Donovan, . . . 1st.
William Newsam, . . . 2nd.
James M. Beamish, . . 3rd.
Thomas Lumsden, . . 4th.

PRACTICE OF MEDICINE.
William F. Newsam, . } 1st.
John Donovan, . }
James M. Beamish, . }
Timothy Crowly, . } 3rd.
Thomas Lumsden, . }

APPENDIX D.

Appendix D.

Examination Papers for Scholarships.

SELECTION OF PAPERS OF QUESTIONS USED AT THE SCHOLARSHIP EXAMINATIONS.

GREEK.—SENIOR SCHOLARSHIP IN ANCIENT CLASSICS.

(A.)—Translate :—

ÆSCHYLUS—*Persæ*, vv. 799–833.

ΧΟΡΟΣ. *πῶς εἶπας; οὐ γὰρ πᾶν στράτευμα βαρβάρων*
περᾷ τὸν Ἕλλης πορθμὸν Εὐρώπης ἄπο;
ΔΑΡΕΙΟΣ. *παῦροί γε πολλῶν, εἴ τι πιστεῦσαι θεῶν*

Appendix D.

Examination Papers for Scholarships.

χρὴ θεσφάτοισιν, ἐς τὰ νῦν πεπραγμένα
βλέψαντα· συμβαίνει γὰρ οὐ τὰ μὲν, τὰ δ' οὔ.
κεἴπερ τάδ' ἐστὶ, πλῆθος ἔκκριτον στρατοῦ
λείπει κεναῖσιν ἐλπίσιν πεπεισμένος.
μίμνουσι δ' ἔνθα πεδίον Ἀσωπὸς ῥοαῖς
ἄρδει, φίλον πίασμα βοιωτῶν χθονί·
οὗ σφιν κακῶν ὕψιστ' ἐπαμμένει παθεῖν,
ὕβρεως ἄποινα κἀθέων φρονημάτων·
οἳ γῆν μολόντες Ἑλλάδ' οὐ θεῶν βρέτη
ᾐδοῦντο συλᾶν οὐδὲ πιμπράναι νεώς.
βωμοὶ δ' ἄϊστοι, δαιμόνων θ' ἱδρύματα
πρόρριζα φύρδην ἐξανέστραπται βάθρων.
τοιγὰρ κακῶς δράσαντες οὐκ ἐλάσσονα
πάσχουσι, τὰ δὲ μέλλουσι, κοὐδέπω κακῶν
κρηπὶς ὕπεστιν, ἀλλ' ἔτ' ἐκπιδύεται.
τόσος γὰρ ἔσται πέλανος αἱματοσταγὴς
πρὸς γῇ Πλαταιῶν Δωρίδος λόγχης ὕπο·
θῖνες νεκρῶν δὲ καὶ τριτοσπόρῳ γονῇ
ἄφωνα σημανοῦσιν ὄμμασιν βροτῶν
ὡς οὐχ ὑπέρφευ θνητὸν ὄντα χρὴ φρονεῖν
ὕβρις γὰρ ἐξανθοῦσ' ἐκάρπωσε στάχυν
ἄτης, ὅθεν πάγκλαυτον ἐξαμᾷ θέρος.
τοιαῦθ' ὁρῶντες τῶνδε τἀπιτίμια,
μέμνησθ' Ἀθηνῶν Ἑλλάδος τε, μηδέ τις
ὑπερφρονήσας τὸν παρόντα δαίμονα
ἄλλων ἐρασθεὶς ὄλβον ἐκχέῃ μέγαν.
Ζεύς τοι κολαστὴς τῶν ὑπερκόπων ἄγαν
φρονημάτων ἔπεστιν, εὔθυνος βαρύς.
πρὸς ταῦτ' ἐκεῖνον σωφρονεῖν κεχρημένον
πινύσκετ' εὐλόγοισι νουθετήμασι,
λῆξαι θεοβλαβοῦνθ' ὑπερκόπῳ θράσει.

1. Πλῆθος ἔκκριτον στρατοῦ κ.τ.λ. Explain this statement.
2. What is the exact meaning of κρηπίς? Translate the line in which it occurs, with the various readings ἐκπιδύεται and ἐκπληθύεται.
3. Explain the construction σωφρονεῖν κεχρημένον.
4. Explain the expression πέλανος αἱματοσφαγῆς by a periphrasis.
5. In what respect is the *Persæ* the most imperfect of the extant tragedies of Æschylus?

(B.)—Translate :—

THUCYDIDES, book iii., c. 89.

Τοῦ δ' ἐπιγιγνομένου θέρους Πελοποννήσιοι καὶ οἱ ξύμμαχοι μέχρι μὲν τοῦ ἰσθμοῦ ἦλθον ὡς ἐς τὴν Ἀττικὴν ἐσβαλοῦντες Ἄγιδος τοῦ Ἀρχιδάμου ἡγουμένου Λακεδαιμονίων βασιλέως, σεισμῶν δὲ γενομένων πολλῶν ἀπετράποντο πάλιν καὶ οὐκ ἐγένετο ἐσβολή, καὶ περὶ τούτους τοὺς χρόνους, τῶν σεισμῶν κατεχόντων, τῆς Εὐβοίας ἐν Ὀροβίαις ἡ θάλασσα ἐπανελθοῦσα ἀπὸ τῆς τότε οὔσης γῆς καὶ κυματωθεῖσα ἐπῆλθε τῆς πόλεως μέρος τι, καὶ τὸ μὲν κατέκλυσε, τὸ δ' ὑπενόστησε, καὶ θάλασσα νῦν ἐστι πρότερον οὖσα γῆ· καὶ ἀνθρώπους διέφθειρεν ὅσοι μὴ ἐδύναντο φθῆναι πρὸς τὰ μετέωρα ἀναδραμόντες. καὶ περὶ Ἀταλάντην τὴν ἐπὶ Λοκροῖς τοῖς Ὀπουντίοις νῆσον παραπλησία γίγνεται ἐπίκλυσις, καὶ τοῦ τε φρουρίου τῶν Ἀθηναίων παρεῖλε καὶ δύο νεῶν ἀνειλκυσμένων τὴν ἑτέραν κατέαξεν. ἐγένετο δὲ καὶ ἐν Πεπαρήθῳ κύματος ἐπαναχώρησίς τις, οὐ μέντοι ἐπέκλυσέ γε· καὶ σεισμὸς τοῦ τείχους τι κατέβαλε καὶ τὸ πρυτανεῖον καὶ ἄλλας οἰκίας ὀλίγας. αἴτιον δ' ἔγωγε νομίζω τοῦ τοιούτου, ᾗ ἰσχυρότατος ὁ σεισμὸς

ἐγένετο, κατὰ τοῦτο ἀποστέλλειν τε τὴν θάλασσαν καὶ ἐξαπίνης πάλιν ἐπισπωμένην βιαιότερον τὴν ἐπίκλυσιν ποιεῖν· ἄνευ δὲ σεισμοῦ οὐκ ἄν μοι δοκεῖ τὸ τοιοῦτο ξυμβῆναι γενέσθαι.

1. What part of the verb is ἐσβαλοῦντες, and what is the exact force of the preceding ὡς?
2. What is the construction of τῶν σεισμῶν κατεχόντων?
3. Supply the ellipses in τὸ μὲν κατέκλυσε, τὸ δ' ὑπενόστησε.
4. Καὶ θάλασσα νῦν ἐστὶ πρότερον οὖσα γῆ. How would the meaning be affected by substituting ἐστὶν ἡ for ἐστί?
5. Τοῦ τε φρουρίου. Why is φρουρίου in the genitive?
6. Describe accurately the positions of the places mentioned in this chapter.

Senior Scholarships.

Translate into Attic Greek :—

It often seems to us a great contradiction in Greek mythology that the chief of the gods should be represented as himself subject to fate. We do not enough consider what a real and deep comfort the polytheist found in this thought. A ruler of the elements might have in himself all the vicissitudes which nature exhibits. If he were like a human sovereign he might have all the caprices of a human sovereign. This faith in necessity told the Greek that the universe was not after all dependent on those natural vicissitudes or human caprices, that a law fixed and unchangeable was beneath them all. At times it seemed to him as if Jove, the king of earth, was chaining down all the aspirations of man, was fastening to a rock, and, tormenting with a vulture, the champions who sought to do him good—to make him freer and wiser. What a relief to think that destiny had determined the period of his captivity and of the tyranny which had imposed it! And yet there were times when the sense of a hard, dry iron rule—an irresistible destiny—became more intolerable than the government of the most uncertain king.

Into Iambic verse :—

Lear. Pray do not mock me :
I am a very foolish fond old man,
Fourscore and upward ; and, to deal plainly,
I fear, I am not in my perfect mind.
Methinks, I should know you, and know this man ;
Yet, I am doubtful : for I am mainly ignorant
What place this is ; and all the skill I have
Remembers not these garments ; nor I know not
Where I did lodge last night. Do not laugh at me ;
For, as I am a man, I think this lady
To be my child, Cordelia.
Cordelia. And so I am ; I am.
Lear. Be your tears wet? Yes, faith, I pray weep not.
If you have poison for me, I will drink it :
I know you do not love me ; for your sisters
Have, as I do remember, done me wrong.
You have some cause, they have not.

Shakespeare.

Appendix D.

Examination Papers for Scholarships.

Greek.—Second Year Scholarships.

Translate :—

(A.)—Homer—*Odyssey*, book xvii., vv. 217–232.

Νῦν μὲν δὴ μάλα πάγχυ κακὸς κακὸν ἠγηλάζει,
ὡς αἰεὶ τὸν ὁμοῖον ἄγει θεὸς ὡς τὸν ὁμοῖον.
πῇ δὴ τόνδε μολοβρὸν ἄγεις, ἀμέγαρτε συβῶτα,
πτωχὸν ἀνιηρόν, δαιτῶν ἀπολυμαντῆρα;
ὃς πολλῇς φλιῇσι παραστὰς θλίψεται ὤμους,
αἰτίζων ἀκόλους, οὐκ ἄορας οὐδὲ λέβητας·
τόν κ' εἴ μοι δοίης σταθμῶν ῥυτῆρα λιπέσθαι
σηκοκόρον τ' ἔμεναι θαλλόν τ' ἐρίφοισι φορῆναι,
καί κεν ὀρὸν πίνων μεγάλην ἐπιγουνίδα θεῖτο.
ἀλλ' ἐπεὶ οὖν δὴ ἔργα κάκ' ἔμμαθεν, οὐκ ἐθελήσει
ἔργον ἐποίχεσθαι, ἀλλὰ πτώσσων κατὰ δῆμον
βούλεται αἰτίζων βόσκειν ἣν γαστέρ' ἄναλτον.
ἀλλ' ἔκ τοι ἐρέω, τὸ δὲ καὶ τετελεσμένον ἔσται·
αἴ κ' ἔλθῃ πρὸς δῶμα' Ὀδυσσῆος θείοιο,
πολλά οἱ ἀμφὶ κάρη σφέλα ἀνδρῶν ἐκ παλαμάων
πλευραὶ ἀποτρίψουσι δόμον κάτα βαλλομένοιο.

1. *a.* Derive ἠγηλάζειν, μολοβρός, ἄκολος, σηκοκόρος, ἀμέγαρτος, ἄναλτος. *b.* Decline ἄορας, κάρη, and σφέλα. *c.* Distinguish between ὄρος and ὀρός. *d.* What is the apparent distinction between ἐθέλειν and βούλεσθαι, as derived from this passage?

(B.)—Æschylus—*Prometheus Vinctus*, vv. 560–584.

Τίς γῆ; τί γένος; τίνα φῶ λεύσσειν
τόνδε χαλινοῖς ἐν πετρίνοισιν
χειμαζόμενον;
τίνος ἀμπλακίας ποιναῖς ὀλέκει;
σήμηνον ὅποι
γῆς ἡ μογερὰ πεπλάνημαι.
ἆ ἆ,
χρίει τις αὖ με τὰν τάλαιναν οἴστρος,
εἴδωλον Ἄργου γηγενοῦς, ἄλευ δᾶ,
τὸν μυριωπὸν εἰσορῶσα βούταν.
ὁ δὲ πορεύεται δόλιον ὄμμ' ἔχων,
ὃν οὐδὲ κατθανόντα γαῖα κεύθει.
ἀλλ' ἐμὲ τὰν τάλαιναν
ἐξ ἐνέρων περῶν κυναγετεῖ,
πλανᾷ τε νῆστιν ἀνὰ τὰν παραλίαν ψάμμον.
ὑπὸ δὲ κηρόπλαστος ὀτοβεῖ δόναξ
ἀχέτας ὑπνοδόταν νόμον· ἰὼ ἰώ, πόποι,
ποῖ, πόποι, ποῖ μ' ἄγουσι τηλέπλανοι πλάναι;
τί ποτέ μ', ὦ Κρόνιε
παῖ, τί ποτε ταῖσδ' ἐνέζευξας εὐρὼν ἁμαρτοῦσαν ἐν πημοσύναις, ἐή,
οἰστρηλάτῳ δὲ δείματι δειλαίαν
παράκοπον ὧδε τείρεις;
πυρί με φλέξον, ἢ χθονὶ κάλυψον, ἢ ποντίοις δάκεσι δὸς βορὰν,
μηδέ μοι φθονήσῃς
εὐγμάτων, ἄναξ.

1. *a.* Explain the construction of ὑπὸ, v. 574. *b.* Distinguish between *νόμος* and *νομός*. *c.* Derive *δάκος*, and explain the construction of *εὐγμάτων*, v. 584.

Translate into Iambic verse :—

1. By the waters of Babylon we sat down and wept, when we remembered thee, O Sion.
2. As for our harps, we hanged them up, upon the trees that are therein.
3. For they that led us away captive required of us a song, and melody, in our heaviness: Sing us one of the songs of Sion.

Translate :—

(A.)—HERODOTUS, book vii., c. 218.

Ἔμαθον δὲ σφέας οἱ Φωκέες ὧδε ἀναβεβηκότας· ἀναβαίνοντες γὰρ ἐλάνθανον οἱ Πέρσαι τὸ οὔρος πᾶν ἐὸν δρυῶν ἐπίπλεον. ἦν μὲν δὴ νηνεμίη, ψόφου δὲ γινομένου πολλοῦ, ὡς οἰκὸς ἦν φύλλων ὑποκεχυμένων ὑπὸ τοῖσι ποσί, ἀνά τε ἔδραμον οἱ Φωκέες καὶ ἐνέδυνον τὰ ὅπλα, καὶ αὐτίκα οἱ βάρβαροι παρῆσαν. ὡς δὲ εἶδον ἄνδρας ἐνδυομένους ὅπλα, ἐν θώυματι ἐγένοντο· ἐλπόμενοι γὰρ οὐδέν σφι φανήσεσθαι ἀντίξοον, ἐνεκύρησαν στρατῷ. ἐνθαῦτα Ὑδάρνης καταρρωδήσας. μὴ οἱ Φωκέες ἔωσι Λακεδαιμόνιοι, εἴρετο τὸν Ἐπιάλτην, ὁποδαπὸς εἴη ὁ στρατὸς, πυθόμενος δὲ ἀτρεκέως διέτασσε τοὺς Πέρσας ὡς ἐς μάχην. οἱ δὲ Φωκέες ὡς ἐβάλλοντο τοῖσι τοξεύμασι πολλοῖσί τε καὶ πυκνοῖσι, οἴχοντο φεύγοντες ἐπὶ τοῦ οὔρεος τὸν κόρυμβον, ἐπιστάμενοι, ὡς ἐπὶ σφέας ὡρμήθησαν ἀρχὴν, καὶ παρεσκευάδατο ὡς ἀπολεόμενοι. Οὗτοι μὲν δὴ ταῦτα ἐφρόνεον, οἱ δὲ ἀμφὶ Ἐπιάλτην καὶ Ὑδάρνεα Πέρσαι Φωκέων μὲν οὐδένα λόγον ἐποιεῦντο, οἱ δὲ κατέβαινον τὸ οὔρος κατὰ τάχος.

1. To what event does the above extract refer? Describe the locality in which it occurred.
2. Give the Attic forms of *οἰκός* and *παρεσκευάδατο*.
3. What are the various meanings of *κόρυμβος*? Derive *νηνεμίη* and *ἀντίξοος*.
4. Distinguish between *ψόφος*, *φωνή*, and *δοῦπος*.

(B.)—PLATO—*Apologia Socratis.*

Εἶεν δή, ὦ ἄνδρες· ἃ μὲν ἐγὼ ἔχοιμ' ἂν ἀπολογεῖσθαι, σχεδόν ἐστι ταῦτα καὶ ἄλλα ἴσως τοιαῦτα. τάχα δ' ἄν τις ὑμῶν ἀγανακτήσειεν ἀναμνησθεὶς ἑαυτοῦ, εἰ ὁ μὲν καὶ ἐλάττω τουτουῒ τοῦ ἀγῶνος ἀγῶνα ἀγωνιζόμενος ἐδεήθη τε καὶ ἱκέτευσε τοὺς δικαστὰς μετὰ πολλῶν δακρύων, παιδία τε αὐτοῦ ἀναβιβασάμενος, ἵνα ὅ τι μάλιστα ἐλεηθείη, καὶ ἄλλους τῶν οἰκείων καὶ φίλων πολλούς, ἐγὼ δὲ οὐδὲν ἄρα τούτων ποιήσω, καὶ ταῦτα κινδυνεύων, ὡς ἂν δόξαιμι, τὸν ἔσχατον κίνδυνον. τάχ' οὖν τις ταῦτα ἐννοήσας αὐθαδέστερον ἂν πρός με σχοίη, καὶ ὀργισθεὶς αὐτοῖς τούτοις θεῖτο ἂν μετ' ὀργῆς τὴν ψῆφον. εἰ δή τις ὑμῶν οὕτως ἔχει,—οὐκ ἀξιῶ μὲν γὰρ ἔγωγε· εἰ δ' οὖν, ἐπιεικῆ ἄν μοι δοκῶ πρὸς τοῦτον λέγειν λέγων ὅτι ἐμοί, ὦ ἄριστε, εἰσὶ μέν πού τινες καὶ οἰκεῖοι· καὶ γὰρ τοῦτο αὐτὸ τὸ τοῦ Ὁμήρου, οὐδ' ἐγὼ ἀπὸ δρυὸς οὐδ' ἀπὸ πέτρης πέφυκα, ἀλλ' ἐξ ἀνθρώπων, ὥστε καὶ οἰκεῖοί μοί εἰσι καὶ υἱεῖς, ὦ ἄνδρες Ἀθηναῖοι, τρεῖς, εἷς μὲν μειράκιον ἤδη, δύο δὲ παιδία· ἀλλ' ὅμως οὐδέν' αὐτῶν δεῦρο ἀναβιβασάμενος δεήσομαι ὑμῶν ἀποψηφίσασθαι.

Describe the constitution of the court before which Socrates was tried, and the forms of its proceeding.

(C.)—Translate into Attic Greek :—

Amongst too many other instances of the great corruption and degeneracy of the age wherein we live, the great and general want of sincerity in conversation is none of the least. The world is grown so full of dissimulation and compliment that men's words are hardly any signification of their thoughts; and if any man measure his words by his heart, and speak as he thinks, and do not express more kindness to every man than men usually have for any man, he can hardly escape the censure of want of breeding.

GREEK.—FIRST YEAR SCHOLARSHIPS.

Translate :—

(A.)—XENOPHON—*Anabasis*, book iii., c. 4, § 44.

Ἐντεῦθεν ἐπορεύοντο ὡς ἐδύναντο τάχιστα. οἱ δ' ἐπὶ τοῦ λόφου πολέμιοι ὡς ἐνόησαν αὐτῶν τὴν πορείαν ἐπὶ τὸ ἄκρον, εὐθὺς καὶ αὐτοὶ ὥρμησαν ἁμιλλᾶσθαι ἐπὶ τὸ ἄκρον. καὶ ἐνταῦθα πολλὴ μὲν κραυγὴ ἦν τοῦ Ἑλληνικοῦ στρατεύματος διακελευομένων τοῖς ἑαυτῶν, πολλὴ δὲ κραυγὴ τῶν ἀμφὶ Τισσαφέρνην τοῖς ἑαυτῶν διακελευομένων. Ξενοφῶν δὲ παρελαύνων ἐπὶ τοῦ ἵππου παρεκελεύετο, Ἄνδρες, νῦν ἐπὶ τὴν Ἑλλάδα νομίζετε ἁμιλλᾶσθαι, νῦν πρὸς τοὺς παῖδας καὶ τὰς γυναῖκας, νῦν ὀλίγον πονήσαντες ἁμαχεὶ τὴν λοιπὴν πορευσόμεθα.

1. *a.* Explain the construction *ὡς ἠδύναντο τάχιστα*, and give the Latin equivalent expression. *b.* Explain the construction of *διακελευομένων*, in the first sentence in which it occurs, and express the force of the preposition *διά*, in the compound word. *c.* Write in full the declension of *ἀνήρ* and *γυνή*.

(B.)—HERODOTUS, book ii., c. 151.

Τῶν δὲ δυώδεκα βασιλέων δικαιοσύνῃ χρεομένων, ἀνὰ χρόνον ὡς ἔθυσαν ἐν τῷ ἱρῷ τοῦ Ἡφαίστου, τῇ ὑστάτῃ τῆς ὀρτῆς μελλόντων κατασπείσειν ὁ ἀρχιρεὺς ἐξήνεικέ σφι φιάλας χρυσέας, τῇσί περ ἐώθεσαν σπένδειν, ἁμαρτὼν τοῦ ἀριθμοῦ ἑνδεκα δυώδεκα ἐοῦσι. ἐνθαῦτα ὡς οὐκ εἶχε φιάλην ὁ ἔσχατος ἑστεὼς αὐτῶν Ψαμμίτιχος, περιελόμενος τὴν κυνέην ἐοῦσαν χαλκέην ὑπέσχε τε καὶ ἔσπενδε. κυνέας δὲ καὶ οἱ ἄλλοι ἅπαντες ἐφόρεόν τε βασιλέες καὶ ἐτύγχανον τότε ἔχοντες. Ψαμμίτιχος μέν νυν οὐδενὶ δολερῷ νόῳ χρεόμενος ὑπέσχε τὴν κυνέην, οἱ δὲ ἐν φρενὶ λαβόντες τό τε ποιηθὲν ἐκ Ψαμμιτίχου καὶ τὸ χρηστήριον, ὅ τι ἐκέχρηστό σφι, τὸν χαλκέην σπείσαντα αὐτῶν φιάλῃ τοῦτον βασιλέα ἔσεσθαι μοῦνον Αἰγύπτου, ἀναμνησθέντες τοῦ χρησμοῦ κτεῖναι μὲν οὐκ ἐδικαίωσαν Ψαμμίτιχον, ὡς ἀνεύρισκον βασανίζοντες ἐξ οὐδεμιῆς προνοίης αὐτὸν ποιήσαντα, ἐς δὲ τὰ ἕλεα ἔδοξέ σφι διῶξαι ψιλώσαντας τὰ πλεῖστα τῆς δύναμιος, ἐκ δὲ τῶν ἑλέων ὁρμεόμενον μὴ ἐπιμίσγεσθαι τῇ ἄλλῃ Αἰγύπτῳ.

(C.)—Translate the following sentences into Greek, adding the accents :—

1. The rest of the Greeks laid waste the land of the Persians.
2. I should be glad to see the troops marching in order.
3. If I had had some bread I would have given it to the poor man.
4. We ought to cultivate virtue and avoid everything that is base.

(D.)—Describe the following localities, and mention the historical events which have rendered them famous :—Artemisium, Tanagra, Sphacteria.

Translate :

(A.)—HOMER—*Iliad*, book v., vv. 9–30.

Ἦν δέ τις ἐν Τρώεσσι Δάρης, ἀφνειός, ἀμύμων,
ἱρεὺς Ἡφαίστοιο· δύω δέ οἱ υἱέες ἦστην,
Φηγεὺς Ἰδαῖός τε, μάχης εὖ εἰδότε πάσης.
τὼ οἱ, ἀποκρινθέντε ἐναντίω ὁρμηθήτην·
τὼ μὲν ἀφ' ἵππ οὐϊν, ὁ δ' ἀπὸ χθονὸς ὦρνυτο πεζός.
οἱ δ' ὅτε δὴ σχεδὸν ἦσαν ἐπ' ἀλλήλοισιν ἰόντες,
Φηγεύς ῥα πρότερος προΐει δολιχόσκιον ἔγχος·
Τυδείδεω δ' ὑπὲρ ὦμον ἀριστερὸν ἦλυθ' ἀκωκὴ
ἔγχεος, οὐδ' ἔβαλ' αὐτόν· ὁ δ' ὕστερος ὦρνυτο χαλκῷ
Τυδείδης· τοῦ δ' οὐχ ἅλιον βέλος ἔκφυγε χειρὸς
ἀλλ' ἔβαλε στῆθος μεταμάζιον, ὧσε δ' ἀφ' ἵππων.
Ἰδαῖος δ' ἀπόρουσε λιπὼν περικαλλέα δίφρον,
οὐδ' ἔτλη περιβῆναι ἀδελφειοῦ κταμένοιο·
οὐδὲ γὰρ οὐδέ κεν αὐτὸς ὑπέκφυγε Κῆρα μέλαιναν,
ἀλλ' Ἥφαιστος ἔρυτο, σάωσε δὲ νυκτὶ καλύψας,
ὡς δή οἱ μὴ πάγχυ γέρων ἀκαχήμενος εἴη.
ἵππους δ' ἐξελάσας μεγαθύμου Τυδέος υἱὸς
δῶκεν ἑταίροισιν κατάγειν κοίλας ἐπὶ νῆας.
Τρῶες δὲ μεγάθυμοι ἐπεὶ ἴδον υἷε Δάρητος
τὸν μὲν ἀλευάμενον, τὸν δὲ κτάμενον παρ' ὄχεσφιν,
πᾶσιν ὀρίνθη θυμός· ἀτὰρ γλαυκῶπις Ἀθήνη
χειρὸς ἑλοῦσ' ἐπέεσσι προσηύδα θοῦρον Ἄρηα.

1. Parse *fully* the following words, giving their Attic forms :—*υἱέες, ἦστην, τώ, Τυδείδεω, ἔκφυγε, ἔρυτο, ἐπέεσσι, ὄχεσφι.*

2. Derive or decompose *ἀφνειός, ἀμύμων, δολιχόσκιος, μεταμάζιος, γλαυκῶπις.*

3. State the laws of Homeric hexameter verse, defining the term *cæsura*, and pointing out the position of the principal cæsuras in the first four lines of the extract.

(B.)—EURIPIDES—*Medea*, vv. 1251–1276.

ΧΟΡΟΣ. ἰὼ Γᾶ τε καὶ παμφαὴς στρ.
ἀκτὶς Ἀελίου, κατίδετ' ἴδετε τὰν
ὀλομέναν γυναῖκα, πρὶν φοινίαν
τέκνοις προσβαλεῖν χέρ' αὐτοκτόνον·
σᾶς γὰρ ἀπὸ χρυσέας γονᾶς
ἔβλαστεν, θεῶν δ' αἵματι πίτνειν
φόβος ὑπ' ἀνέρων.
ἀλλά νιν, ὦ φάος διογενές, κάτειρ-
γε κατάπαυσον, ἔξελ' οἴκων φονίαν
τάλαιναν τ' Ἐρινὺν ὑπ' ἀλαστόρων.
μάταν μόχθος ἔρρει τέκνων, ἀντ.
μάταν ἄρα γένος φίλιον ἔτεκες, ὦ
κυανεᾶν λιποῦσα Συμπληγάδων
πετρᾶν ἀξενωτάταν εἰσβολάν.
δείλαια, τί σοι φρενῶν βαρὺς
χόλος προσπίτνει καὶ δυσμενὴς
φόνος ἀμείβεται;
χαλεπὰ γὰρ βροτοῖς ὁμογενῆ μιά-
σματ' ἐπὶ γαῖαν αὐτοφόνταις ξυνῳ-
δὰ θεόθεν πίτνοντ' ἐπὶ δόμοις ἄχη.

Appendix D.

Examination Papers for Scholarships.

ΠΑΙΔΕΣ. *οἴμοι, τί δράσω ; ποῖ φύγω μητρὸς χέρας ;*
ΧΟΡΟΣ. *ἀκούεις βοὰν ἀκούεις τέκνων ;*
ἰὼ τλᾶμον, ὦ κακοτυχὲς γύναι.
παρέλθω δόμους ; ἀρῆξαι φόνον
δοκεῖ μοι τέκνοις.

1. Point out the Doric forms in extract (B), giving their Attic equivalents, and explaining their introduction into the choral portions of the Attic drama.
2. Describe accurately the position of the Symplegades.
3. Give the *ordo verborum*, and explain the construction of the sentence *χαλεπὰ γὰρ βροτοῖς . . . δόμοις ἄχη.*

JOHN RYALL, *Professor.*

LATIN.—SENIOR SCHOLARSHIP.

Subject for a Latin Essay.

"Tota philosophia frugifera et fructuosa est."

Translate into Latin verse, in an appropriate metre :—

Now, upon Syria's land of roses
Softly the light of eve reposes,
And, like a glory, the broad sun
Hangs over sainted Lebanon ;
Whose head in wintry grandeur towers,
And whitens with eternal sleet,
While summer, in a vale of flowers,
Is sleeping rosy at his foot.
To one who look'd from upper air
O'er all the enchanted regions there,
How beauteous must have been the glow,
The life, the sparkling from below !

LATIN.—SCHOLARSHIPS OF THE SECOND AND THIRD YEARS.

Translate in as few words as possible :

TACITUS—*Histories*, i. 10.

Oriens adhuc inmotus. Suriam et quattuor legiones obtinebat Licinius Mucianus, vir secundis adversisque iuxta famosus. Insignes amicitias iuvenis ambitiose coluerat ; mox attritis opibus, lubrico statu, suspecta etiam Claudii iracundia, in secretum Asiae repositus tam prope ab exule fuit quam postea a principe. Luxuria industria, comitate adrogantia, malis bonisque artibus mixtus. Nimiae voluptates, cum vacaret : quotiens expedierat, magnae virtutes. Palam laudares : secreta male audiebant. Sed apud subiectos, apud proximos, apud collegas variis inlecebris potens, et cui expeditius fuerit tradere imperium quam obtinere.

Translate into Latin verse :—

Oh, thou Parnassus! whom I now survey,
Not in the phrensy of a dreamer's eye,
Not in the fabled landscape of a lay,
But soaring snow-clad through thy native sky,
In the wild pomp of mountain majesty!
What marvel if I thus essay to sing?
The humblest of thy pilgrims passing by
Would gladly woo thine echoes with his string,
Though from thy heights no more one Muse will wave her wing.

Translate into Latin prose:—

Besides these several advantages which rise from Hope, there is another which is none of the least, and that is, its great efficacy in preserving us from setting too high a value on present enjoyments. The saying of Cæsar is very well known. When he had given away all his estates in gratuities amongst his friends, one of them asked what he had left for himself, to which that great man replied, Hope. His natural magnanimity hindered him from prizing what he was certainly possessed of, and turned all his thoughts upon something more valuable that he had in view.

I question not but every reader will draw a moral from this story, and apply it to himself without my direction.

LATIN.—FIRST YEAR'S SCHOLARSHIPS.

1. Explain fully the words *comitia*, *curiata*, *tributa*, and *centuriata*.
2. How are time and place expressed in Latin?
3. Give the principal parts of *cupio*, *pario*, *gigno*, *curro*, and *verro*.
4. Describe the situation of Agrigentum, Panormus, Lugdunum, Nemausus, Numantia, and Verona.
5. State the rules for the second foot of the hexameter verse, with examples.

Retranslate into Latin :—

It moved me to hear of the tears which you shed after you left me: had you done it in my presence, I should have dropt perhaps all thoughts of my journey. That part however pleases me, where you comfort yourself with the hopes of our meeting again shortly: which expectation indeed is what chiefly supports me: I will write to you perpetually; give you an account of everything which relates to Brutus; send you very shortly my Treatise on Glory; and finish for you the other work, to be locked up with your treasure.

B. LEWIS, *Professor*.

ENGLISH LANGUAGE AND LITERATURE.—SCHOLARSHIPS OF THE SECOND AND THIRD YEARS.

1. What was the relative position of English and Norman-French for two centuries after the Norman Conquest?
2. When did the use of French cease, (1) in the schools, (2) in the courts of law?
3. Quote any passage from Robert of Gloucester, which bears upon the history of the English language. Or give the substance of such a passage in your own words, and comment upon it.

Appendix D.

Examination Papers for Scholarships.

4. What is Spenser's "Faerie Queene"? What is the design of that poem?
5. Enumerate Ben Jonson's plays. What were the relations between Ben Jonson and Shakespeare?
6. Sketch the plot of "Macbeth."

ENGLISH LANGUAGE AND LITERATURE.—SENIOR SCHOLARSHIP.

1. Give some account of the Vision of Piers Ploughman.
2. Sketch the plot of Chaucer's Canterbury Tales.
3. Account for the dearth of English poetry from Chaucer to Spenser. Review the Scottish poetry during that interval.
4. State the plot of Shakespeare's "Julius Cæsar."

HISTORY.

5. What was the constitution of the Witenagemot?
6. Explain the terms *scyre-gemot, scyre-gerefa, ealdorman, wer-gild, boc-land.*
7. Trace the origin of the Feudal System.
8. Describe the ceremonies used in conferring a fief.
9. Estimate the results of the Norman Conquest.
10. What changes in the administration of the law were introduced in the reign of Henry II.?

ENGLISH LANGUAGE.—SCHOLARSHIPS OF THE FIRST YEAR.

1. Give the derivation of these words: *contribute, republic, constitution, aristocracy, democracy, monarchy.*
2. Explain the use of the infinitive in these sentences:—

(*a.*) *To walk* in the country is pleasant.
(*b.*) He loves *to ride.*
(*c.*) This coat is too good *to throw* away.

3. Show that Anglo-Saxon and Norman-French form the groundwork of the English language. What other languages have contributed to our vocabulary?
4. What effects resulted from the Roman occupation of Britain? What is meant by the Latin of the First Period?

HISTORY.

5. Sketch the character of Themistocles.
6. Describe the sack of Rome by the Gauls.

WILLIAM RUSHTON, *Professor.*

MODERN LANGUAGES.

Translate into French, Italian, or German:—

No other disposition or turn of mind so totally unfits a man for all the social offices of life as indolence. An idle man is a mere blank in the creation; he seems made for no end, and lives to no purpose. He cannot engage himself in any employment or profession, because he will never have diligence enough to follow it; he can succeed in no undertaking, for he will never pursue it; he must be a bad husband, father, and relation, for he will not take the least pains to preserve his wife, children, and family from starving; and he must be a worthless friend, for he would not draw his hand from his bosom, though to prevent the destruction of the universe. If he is born poor he will remain so all his life, which he will probably end

in a ditch, or at the gallows; if he embarks in trade he will be a bankrupt; and if he is a person of fortune his stewards will acquire immense estates, and he himself, perhaps, will die in the Fleet.

It should be considered that nature did not bring us into the world in a state of perfection, but has left us in a capacity of improvement, which should seem to intimate, that we should labour to render ourselves excellent. Very few are such absolute idiots, as not to be able to become at least decent, if not eminent, in their several stations, by unwearied and keen application; nor are there any possessed of such transcendent genius and abilities, as to render all pains and diligence unnecessary. Perseverance will overcome difficulties which at first appear insuperable; and it is amazing to consider, how great and numerous obstacles may be removed by a continual attention to any particular point.

1. Give the principal rules on the use of the subjunctive mood and illustrate them by examples.
2. What influence had the French language on the formation of the modern English?
3. At what time and in what manner did the French language principally consolidate itself?
4. Enumerate Racine's best tragedies.
5. What is the principal character of his works?
6. State what you know of the characteristics of the chronicles, memoirs, and of history, in French literature.
7. What was the influence of Dante on the Italian language and literature?
8. State what you know of the life of Tasso, and characterize his epic poem.
9. Enumerate the principal languages of the Teutonic family.
10. Give a short account of the life of Schiller.

MATHEMATICS.—SENIOR SCHOLARSHIP.

1. Show that the number of permutations of n things taken r together in which p identical things always occur, is $\frac{\lfloor n-p \rfloor r}{\lfloor n-r \rfloor n-p \rfloor p}$

2. Prove that $N^{n^r-n^{r-1}}$ is divisible by n^r, when n is prime and N not divisible by n. Show also that any number in the scale whose radix is $2n$, ends in the same digit as its n^{th} power.

3. Find the value of $\left\{1+\sqrt{-1}\tan\frac{a}{n}\right\}^n$ when n increases without limit.

4. Sum to n terms the series

$$\cos\theta\cos^2\frac{\theta}{2}\operatorname{cosec}^2\left(\frac{3}{2}\theta\right)+\cos 3\theta\cdot\cos^2\frac{3}{2}\theta\operatorname{cosec}^2\frac{3^2}{2}\theta+$$
$$\cos 3^2\theta\cos^2\frac{3^2}{2}\theta\operatorname{cosec}\frac{3^3}{2}\theta+\ldots.$$

5. If CD be the semi-diameter of an ellipse conjugate to CP, and if DQ be drawn parallel to SP and CQ perpendicular to DQ, prove that CQ is equal to semi-axis minor.

6. Prove that the co-ordinates of the focus of the parabola

$$A^2x^2-2ACxy+C^2y^2+2Dx+Ey+1=0$$

are $\frac{C^3+C^2E+A^2C+2ADE}{2(A^2+C^2)(AE+CD)}$ and $\frac{A^3+A^2D+AC^2+2CDE}{2(A^2+C^2)(AE+CD)}$

the axes being rectangular.

Appendix D.

Examination Papers for Scholarships.

7. Find the differential equation of the curve described by one of the foci of an ellipse which rolls on a straight line.

8. Find the particular function of x and y that z must be to satisfy both the differential equations $z=px+qy$, $z^2=px^2+qy^2$.

9. If θ be the angle that the tangent at (x, y) makes with the axis of x, prove that

$$\left(\frac{d^2x}{d\theta^2}\right)^2+\left(\frac{d^2\phi}{d\theta^2}\right)^2=\rho^2+\left(\frac{d\rho}{d\theta}\right)^2$$

10. Evaluate the integral

$$\int_0^a \sqrt{a^2-x^2}\,dx, \quad \int_0^\pi \frac{dx}{1+\cos d\cos x}, \quad \int_0^\pi \cos(\sin x)\,dx.$$

11. Show how to differentiate an integral with respect to any quantity involved in it.

Differentiate $\int_{(a-4)}^{3a} \frac{dx}{6\,a-x}$ with respect to a.

12. A and B are two fixed points, P a point which moves in space, so that PA : PB in a constant ratio ; find locus of P.

13. Show that the equation to an enveloping cylinder of an ellipsoid is

$$\left(\frac{x^2}{a^2}+\frac{y^2}{b^2}+\frac{z^2}{c^2}-1\right)\left(\frac{\lambda^2}{a^2}+\frac{\mu^2}{b^2}+\frac{\nu^2}{c^2}\right)=\left(\frac{\lambda x}{a^2}+\frac{\mu y}{b^2}+\frac{\nu z}{c^2}\right)^2$$

where $\frac{x^2}{a^2}+\frac{y^2}{b^2}+\frac{z^2}{c^2}=1$ is the equation to the ellipsoid, and λ, μ, ν the direction cosines of the generating line of the cylinder.

CHEMISTRY.—SENIOR SCHOLARSHIP IN ARTS OF THE FOURTH YEAR.

1. Show that in a given measure of carbonic acid there is contained its own volume of oxygen.

2. Point out the manner in which the density of a vapour is taken.

3. Point out the changes which take place when hyposulphite of soda, water, and bromine are heated together.

4. Give the formula, the mode of preparation, and the properties of the hydrogen compounds of phosphorus.

5. In the square prismatic system a prism of the second order is derived from the primary octahedron. Show how this is effected. Give the notation of its faces.

6. How is the atomic weight of an organic acid ascertained? Calculate the formula of an acid, the atomic weight of which is 122, and which gives in 100 parts on combustion—

C = 68·85
H = 5·00
O = 26·15

100

7. Describe shortly the metallurgy of zinc.

8. What is the difference between an empirical and a rational formula? Calculate the empirical formula of a substance which gives in 100 parts on combustion—

C = 54·54
H = 9·10
O = 36·36

100

9. Write out, according to the type on which each compound is formed, the formula of a monatomic alcohol and of its corresponding glycol.

10. Explain the true nature of a natural fat, such as stearine. Describe the changes which take place in saponification of the fats with an alkali.

11. Describe generally the monamines and monamides, and the way in which they are prepared.

12. Give the names and formulæ of the polymers of cyanic acid.

CHEMISTRY.—SECOND YEAR SCHOLARSHIPS IN MEDICINE AND ENGINEERING.

N.B.—The Names and Faculty of each Student are to be written on the first page of each book.

Answers to any *ten* of the following questions will be considered sufficient.

1. Give the composition by weight and by volume, and the different modes for the preparation of carbonic oxide.

2. In what respects does the process for preparing hydriodic acid differ from that for hydrochloric acid? Give the best tests for the two acids.

3. How is hyposulphite of soda prepared? State what are the properties of this salt, and of the acid when separated from its base.

4. Write the formulæ of anhydrous and of hydrate of potash on the water type.

5. Write in symbols the reactions which take place on passing chlorine into a solution of protosulphate of iron. How would you show that the salt has been changed?

6. How are the two oxides of copper prepared? With what compound is the black oxide isomorphous?

7. Give the formulæ of the oxygen compounds of chromium. State how the chromate and the bichromate of potash are prepared from chrome iron ore.

8. Metallic mercury is boiled with strong sulphuric acid and evaporated to dryness, and the residue is sublimed with chloride of sodium. To the sublimate a solution of ammonia in water is added: describe the various reactions which take place.

9. Arsenic and antimony are in the same solution. How would you detect their presence, and distinguish the one from the other, by means of nascent hydrogen?

10. How would you ascertain the presence of nitrogen in an organic substance? Describe the process of Will and Varrentrapp for estimating the amount of this element.

11. What is the difference between a homologous and a heterologous series? Illustrate by examples.

12. Describe a saturated and a non-saturated compound. Illustrate them from some of the hydrogen compounds of the tetratomic element carbon.

13. Write according to its type the formula of ethylsulphuric acid. Give some of its properties.

14. How are the simple and compound ethers of a monatomic alcohol formed? Write the formula of one of each kind of ether.

15. What is the supposed constitution of the organic alkaloids? Give a general formula representing the constitution of conine, and the class to which it belongs.

16. Point out the distinction between atoms, equivalents, and molecules. Write according to molecular and to atomic notation the union of ammonia with hydrochloric acid.

J. BLYTH, *Professor.*

Appendix D. NATURAL PHILOSOPHY.—MEDICAL SCHOLARSHIPS OF THE SECOND YEAR.

Examination Papers for Scholarships.

1. A square is placed vertically in water, having one angle in the surface and diagonal vertical; compute the pressure on the surface.

2. A luminous point is placed between two mirrors inclined at an angle; show that the images formed by the mirrors lie in the circumference of a circle.

3. What is the form of the crystalline lens in the eye of a fish? Assign an optical reason for the peculiarity of its form.

4. Describe Nicol's prism and its use.

5. Describe Bunsen's galvanic battery.

6. Magnetic properties can be conferred on an iron bar, by mechanical action, by induction of a magnet, or by an electric current. Describe experiments to exemplify each method.

7. How is it shown that frictional electricity possesses the power of producing heat and chemical action?

8. Explain some method of determining the dew point.

9. Describe the mode of action of an electrical condenser.

10. If a metallic disc be rotated between the poles of a powerful magnet, the disc becomes heated; how do you explain this?

JOHN ENGLAND, A.M., *Professor.*

BOTANY AND ZOOLOGY.

1. Describe the floral envelopes of any British grass.

2, 3. Compare the fruits of the currant, strawberry, and pear, with the flowers from which they have been developed.

4. Describe the foliage of the Ash, Beech, Sycamore, and Yew.

5. Name the natural orders which yield the following poisonous plants:—Aconite, Digitalis, Henbane, Lobelia, and Tobacco.

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6. How is the ingestion of nutrient matter effected among the anenterate worms?

7, 8. Give some account of the skeleton of Echinus.

9. Define carefully any order, or larger division, of Reptiles.

10. Name the principal families of carnivorous mammals, commenting briefly on their geographical distribution.

J. REAY GREENE, B.A., M.D.

PHYSICAL GEOGRAPHY AND GEOLOGY.—SENIOR SCHOLARSHIP IN NATURAL SCIENCE.

1. What are the circumstances necessary for the production of coral islands?

2. What cause prevents the formation of a delta at the mouth of the river of the Amazons?

3. Describe the features which mark metamorphic rocks; and give the names and compositions of some of these rocks.

4. What is the position, and what are the characteristic fossils of the Skiddaw, Slate, or Shelar group of rocks.

5. Give the divisions of the Permian formation as this occurs in the county of Durham; and name some of its characteristic fossils.

6. To what formation do reptiles of the order Samoptuygia appertain? and name some of the forms of these reptiles.

7. What are the mammal remains which have been obtained from the Purbeck strata?

8. Give the series of strata which make up the Eocene group of the Isle of Wight, and name some of the characteristic fossils.

9. What is the mineral nature of the Miocene strata of Switzerland; and name some of the plant remains which occur therein?

Examination Papers for Scholarships.

GEOLOGY AND MINERALOGY.—ENGINEERING SCHOLARSHIP OF THE THIRD YEAR.

1. To what group of rocks does Chlorite-schist belong, and what is its mineral composition?

2. What forms do Basaltic Rocks assume, and what minerals compose these rocks?

3. What is the position of the Upper Llandovery, or May Hill Sandstones? and name some of the most characteristic fossils of these rocks.

4. What is the position of the Eifel Limestone, and what its most characteristic fossils?

5. What is the position of the Rock-salt deposits of the British Isles; and what are the rocks usually associated with this substance?

6. What are the groups of strata which make up the Cretaceous formation; and name some of the fossils which make these groups?

7. What is the position of the Numulitic Limestone; and what fossils are most common thereto?

8. Where in England are the Pliocene deposits represented, and what is the arrangement of these?

9. What is the system of crystals to which Fluor-spar belongs, and in what forms does this mineral usually occur?

10. What are the minerals which are composed of combinations of sulphur and iron?

ROBERT HARKNESS.

FACULTY OF LAW.

PERSONAL PROPERTY.—SCHOLARSHIP OF SECOND YEAR.

1. To what extent can a man appropriate an animal he has tamed?

2. If a chattel real or personal be assigned to "A and the heirs of his body," what estate therein has A? Explain the principle on which this depends.

3. Can a "chose in action" be legally assigned? How is the technical rule on this subject evaded?

4. Show how a contract may be void by reason of the nature of the consideration, or of the promise founded thereon.

5. What is meant by a bond being single; and what happens if the condition of the bond be not performed? And what is the effect of some part of the condition being illegal, and other parts not?

6. What effect has an adjudication in Bankruptcy on the real and personal estate respectively of the Bankrupt, and on what property, although vested in him, is it inoperative?

7. What are the respective technical appellations of a person addressing a bill of exchange to another desiring him to pay a third a certain sum of money, of the person to whom it is addressed, and of the person to whom he is desired to pay the money?

8. What is the effect of an endorsement of a bill of exchange after its maturity, that is, when overdue, as between the endorser and acceptor?

9. What is a bill of lading—its form, object, and effect? How does its endorsement for valuable consideration operate on the consigner's right of "stoppage *in transitu*?"

10. What is a *del credere* commission?

11. What court has jurisdiction as to wills of personalty and the administration of the personal estate of intestator, and state the effect of the Statute of Distributions, as to the rights of the widow (if one), and the

Appendix D.

Examination Papers for Scholarships.

next of kin of an intestate to shares of the personal estate and effects of an intestate, and the distinction between shares taken per *stirpes* and per *capita*.

SMITH'S "LEADING CASES."—SCHOLARSHIP OF THIRD YEAR.

1. A remits the sum of £100 to B, and afterwards informs B that the remittance is intended to be paid over to C. Is anything further essential to enable C to recover the money in an action against B?

2. What principle as to the admissibility of evidence, was decided in the case of "Price *v.* Torrington" (Salk. 285)? What comment on this case is reported to have been made by Lord Abinger, *C. B.*, in his judgment in the case of Brain *v.* Preece (11 Meeson & Welsby, 773)?

3. How is the rule of pleading laid down in the case of Rice *v.* Shute (Burroughs, 2611) affected by the Common Law Procedure Act (16 & 17 Vic., cap. 113, secs. 84 to 91)?

4. If a party occupy land, and pay rent for it under a panel agreement to hold for a term of seven years, what is the nature of the tenancy? and assuming it to continue until the expiration of the term of seven years, is a notice to quit essential to enable the landlord to re-enter? Refer to the leading cases on this question.

5. Is the principle affirmed in the case of Godsall *v.* Boldero still law? What is the law in Ireland where a policy of life assurance contains no averment of an interest by the insurer in the life assured?

6. State the rule of construction upon which the decision of the Court, in Roe *v.* Tranmar (Willes, 632), was founded.

7. State the maxim of law on which the decision in the case of Merryweather *v.* Nixon (8 T.R., 186), is grounded.

EQUITY (STORY).—SCHOLARSHIP OF THIRD YEAR.

1. What cases of accident are relievable in a Court of Law, and what cases cannot be relieved against even in Equity? What considerations govern a Court of Equity in granting relief in such cases?

2. Define the kind of concealment in dealings and contracts between parties which will amount to fraud in the sense of a Court of Equity, and for which it will grant relief.

3. A mortgages two estates to B. Afterwards A mortgages one of the same estates to C and the other to D, by distinct mortgages, C and D each having notice of the first mortgage to B. The mortgaged estates turn out not to be sufficient to pay all the three mortgages. In such a state of facts, as between himself and B (the first mortgagee) has D a right to have the estates marshalled so as to throw the whole of the first mortgage on the property mortgaged to C?

4. Where an estate is conveyed or devised on trusts which fail altogether, or which cannot take effect, what takes place?

5. What was the principle decided in the cases of Tullett *v.* Armstrong, 4 Mylne & Craig, 377; and Scarborough *v.* Borman, 4 Mylne and Craig, 379, cited in 2 Story, page 602?

6. What are the objects respectively of a bill of "discovery," "to perpetuate testimony," and a bill "de bene esse;" and what is requisite to enable a plaintiff to sustain a bill "de bene esse"?

7. Describe or give an instance of an estoppel in Equity.

EQUITY.—SCHOLARSHIP OF SECOND YEAR.

1. Explain the jurisdiction at common law of the Lord Chancellor, as distinguished from his jurisdiction in Equity, and his authority for the protection of Infants and Lunatics, and its nature.

2. Give an example of an implied resulting trust and a constructive trust respectively, and explain the principle on which each is founded.

3. Describe the doctrines of "conversion," "satisfaction," and "election" in Equity.

4. Give some instances illustrative of the doctrine that Equity considers what is agreed to be done as having been actually done.

5. What is an Equitable Mortgage, and how may it be created?

6. What classes of litigation are exclusively the subject of the jurisdiction of a Court of Equity? Over what have Courts of Law and Equity a concurrent Jurisdiction?

7. When are the proceedings in Equity commenced by "Information"?

8. Upon what principle is the Jurisdiction of a Court of Equity in suits for the administration of assets founded? Explain the distinction between the application of Legal and Equitable assets.

9. What is Equitable waste?

10. Mention some of the purposes for which the protective jurisdiction of a Court of Equity is exercised and how it is enforced.

11. Upon what grounds does Equity exercise jurisdiction in partnership cases? On the death of one of several members of a firm in trade, what remedies, and against whom, has a creditor of the firm in Law and in Equity?

12. What is the Jurisdiction of a Court of Equity in matters relating to wills of real or personal property?

13. Distinguish between "trusts executed" and "executory," with respect to the manner of their administration in Equity.

REAL PROPERTY AND CONVEYANCING.—SCHOLARSHIP OF FIRST YEAR.

1. In what different ways may estates be held in reference to the number and connexion of their owners?

2. Explain the effect of the Statute "De Donis Conditionalibus" upon estates limited to a man and "the heirs of his body;" and what was the occasion and object of that Statute?

3. What is that kind of estate tail called which cannot be barred by the tenant in tail?

4. Explain the difference between the mode of barring an estate tail, properly so called, and an estate in quasi entail in leaseholds for lives renewable for ever.

5. To what kind of products does the doctrine of "emblements" extend?

6. Explain the terms "feoffee to uses," and "cestui que use."

7. What is the difference between common and special occupancy; and by what legislative provisions has the title by common occupancy been in effect put an end to?

8. What are the formal parts of a deed? In the following instances of variance between the "premises" and the "habendum" of a conveyance, state the result with reasons:—

PREMISES.	HABENDUM.
To A,	To hold to A and his heirs.
To A for life,	,, to A and his heirs.
To A for twenty-one years,	,, to A and his heirs.
To A,	,, to A from the death of B.
To A and his heirs,	,, to A for life.
To A and his heirs,	,, to A and the heirs of his body.
To A and the heirs of his body,	,, to A and his heirs.

9. What are the three species of rent at common law, and how may rents be created? A tenant for life makes a lease under a leasing power

Appendix D.

Examination Papers for Scholarships.

for a term of years, and dies during a current gale. Who is entitled to receive the amount of the rent accruing due on the gale day next after the death of the tenant for life?

10. Distinguish between the kinds of real property which "lie in livery" and those which "lie in grant."

11. What was necessary, according to the Statute of Frauds, for the valid devise of freehold property? To what wills does the present Statute of Wills apply; and what requisites does it prescribe for the valid execution of a will?

12. By what general rules of construction are wills governed? Explain an *executory* devise.

13. For what period must a marketable title be shown to real estate, corporeal or incorporeal?

MICHAEL BARRY, *Professor.*

POLITICAL ECONOMY.

1. The President of the Liverpool Chamber of Commerce has stated in a recent report that considerable commercial uneasiness was caused by the fact of the joint-stock banks holding insufficient reserves; and by the extent to which the Bank of England employed the deposits of such banks without taking due note of their special character, these deposits being the reserves of the bankers to whom they belong, and in times of monetary pressure cannot with safety be employed by the Bank of England. State your opinion as to whether this reasoning, with reference to the employment of such deposits by the Bank of England, is correct, and the grounds for your opinion.

2. If you dissent from the policy of the Bank Charter Act, state the mode in which you conceive the currency of the country ought to be regulated, and your reasons.

3. Mill says it is not true that low wages, in the sense of low cost of labour, and common to the whole productive industry of the country enables such country to sell cheaper in the foreign market. State the reasons he gives for such conclusion: and if you differ from him, state the grounds of your dissent.

4. State the arguments that have been advanced for and against the existence of trades' unions, with your opinion as to the economical effect of such societies, and the reasons for such opinion.

5. Explain the manner in which profits are affected by improvements in production, and by the opening of new foreign trades.

6. Explain the way in which the general rate of profit is affected by an increase of capital accompanied by a proportionate increase in the population.

7. Mill gives one case in which a protecting duty might be desirable. Explain the principle on which he makes this exception to the general rule of free trade.

8. State the arguments for and against the paying off the National Debt (or any large portion of it), by raising a surplus annual revenue to be applied to such purpose. Say also your own opinion of the expediency of such a course, and the reasons for such opinion.

9. Explain the mode in which the economical condition of the labouring classes is affected by the introduction of machinery and other improvements in the processes of production.

10. State some of the exceptions made by Mill to the application of the principle of "laissez-faire," and the reasons he assigns for making such exceptions.

11. State the principles by which the legislature should be guided when imposing an income-tax. State, also, the principles which should be observed when taxing commodities.

Examination Papers for Scholarships.

ANATOMY AND PHYSIOLOGY.—MEDICAL SCHOLARSHIP OF THE SECOND YEAR.

1. Describe the microscopic characters of the structures entering into the teeth, and give an outline of their chemical composition.
2. Describe the interior of the left ventricle of the heart.
3. Describe the general and microscopic features of white fibrous tissue.
4. State the structure of the pulmonary lobules.
5. Give an outline of the mechanical construction of the thorax; mention the actions of the muscles engaged in the function of respiration.
6. Describe the microscopic features of a transverse section of long bone.

ANATOMY AND PHYSIOLOGY.—SCHOLARSHIPS OF THE FOURTH YEAR.

1. Describe the microscopic features of the vesicular nervous substance.
2. Describe the structure of the Pacinian corpuscles.
3. Describe the bronchial tubes and the structure of the air vesicles of the lungs.
4. What are the sources and mode of production of heat in the body?
5. State the functions of muscular tissue, and describe the microscopic features of striated muscular fibre.
6. Describe the position, connexions, superficial and deep arrangements of the medulla oblongata.
7. Describe the origin and course of the pneumogastric nerve; also mention the branches of distribution and communication.
8. Describe the duodenum intestine and the glands of Brunn.
9. Describe the follicles of Lieberkühn and the glands of Peyer.

ANATOMY AND PHYSIOLOGY.—MEDICAL SCHOLARSHIP OF THE THIRD YEAR.

1. Enumerate the branches of the pneumogastric nerve, and state the general distribution and function of each branch.
2. Describe the third ventricle of the brain.
3. Describe the structure and functions of the lymphatic vessels and glands.
4. Mention the constituents of the urine, the composition of urea and uric acid.
5. How may it be demonstrated that the spinal nerves are of a compound character, and that the spinal cord exercises power independent of that derived from its connexion with the brain?
6. Give an estimate founded on calculation and experiments, with respect to the time required for the passage of the total quantity of blood through the body.

PRACTICAL ANATOMY.

1. Describe the crural ring, and mention its relation to vessels; then describe the crural canal and the saphenous opening.
2. Describe the origin, insertion, relations, and structure of the rectus abdominis muscle.
3. Describe the attachments and relations of the peroneus longus and peroneus brevis muscles.
4. Describe the origin, course, relations, branches, and inosculations of the subscapular artery.

Appendix D.

Examination Papers for Scholarships.

5. Describe the origin, course, and branches of the median nerve.
6. Describe the origin, course and relations of the internal pudic artery; name the branches of the vessel.
7. Describe the eight specimens placed before you.

PRACTICAL ANATOMY.—MEDICAL SCHOLARSHIP OF THE FOURTH YEAR.

1. Mention the boundaries and contents of the popliteal space.
2. Describe the origin, course, and relations of the great sacro-ischiadic nerve.
3. State the several relations of the prostate gland and the mode of exposing it by dissection.
4. State the origin, course, and relations of the arteria innominata.
5. Mention the steps which you would take in order to examine the membranes of the brain, and afterwards for the removal of that organ from the cranial cavity.
6. Describe the course and relations of the brachial artery.
7. Describe the eight specimens placed before you.

J. H. CORBETT.

PATHOLOGY.—FOURTH YEAR SCHOLARSHIP.

1. What is the condition of the blood in rheumatism, and what parts of the body are principally affected by it?
2. What is the difference between the condition of the blood in chlorosis and anæmia?
3. What are the several causes of general anasarca, and the explanation of its mode of formation in each case?
4. What is the change in the specific gravity of the urine caused by Bright's disease? The explanation of the change and the tests to be used?
5. What is the colour of the skin in advanced cirrhosis of the liver and the appearance of the bile found in the gall bladder?
6. How is secondary cancer produced?
7. What metamorphosis is tuberculous matter likely to undergo?
8. What parts of the body are most liable to this disease in the different periods of life?
9. What disease is the brain most liable to in childhood, and what in advanced period of life, and the cause of this difference?
10. What is the effect of adherence of the pericardium on the size of the heart, and the reason of this chance?

DENIS C. O'CONNOR, A.B., M.D.

SURGERY.—FOURTH YEAR'S SCHOLARSHIP.

No. 1.—Describe the pathology of traumatic fever, the symptoms, duration, result, and treatment, and also of Hectic Fever.

No. 2.—What are the productive inflammatory changes of the nutritive process, and what the destructive?

No. 3.—In what regions of the world is the Dracunculus endemic? What is its natural history, and size, the symptoms of its existence, its effects, and the treatment for its cure?

No. 4.—What are the varieties of adenocele of the female breast, the symptoms and effects, the prognosis, and treatment?

No. 5.—Describe the structure of the male urethra, and from what conditions of it do strictures proceed, and what are they called; also state the

symptoms and effects of each, and the different appropriate methods of treatment, and the operations for permeable and impermeable strictures.

No. 6.—What are the symptoms of fracture of the neck of the femur within the capsule? How are they repaired, and how distinguished from dislocation of the hip joint on the dorsum of the ilium? Describe accurately the treatment for each of those injuries.

No. 7.—Describe Hey's and Chopart's operations on the foot, and Symes and Perigoff's at the ankle.

PROFESSOR TANNER.

MIDWIFERY.—FOURTH YEAR'S MEDICAL SCHOLARSHIP.

1. To what class of membranes would you refer the amnion? Describe minutely its origin and mode of formation. What purposes does it serve; and to what diseased conditions is it liable?

2. You are asked your opinion as to the relative rank and importance of the uterus and the ovary in the female economy. Give arguments derived from human and comparative anatomy and physiology, as well as from pathology, in support of your views on this question.

3. Enumerate the principal displacements to which the gravid uterus is liable; their causes, diagnosis, and treatment.

4. What effects on the progress of a labour are to be expected from the early rupture of the membranes; and how are these effects supposed to be produced? Do they always follow; what concomitant circumstances are occasionally found to mitigate them?

5. What powers besides that of simple traction, should the forceps possess, so that its use might be safe and efficient in cases of moderate disproportion? Under what circumstances may these powers be availed of, and within what limits may they be exercised?

6. A woman, a few days after delivery, is suddenly seized with febrile symptoms; it may be ephemeral fever, or it may be puerperal. Give the points of difference between these two diseases, on which you would rest your diagnosis.

J. (R.) HARVEY, *Professor of Midwifery.*

THERAPEUTICS.—SENIOR SCHOLARSHIPS.

1. What are the chief modes of ascertaining the therapeutical value of medicinal agents? What are the advantages and disadvantages of each?

2. What circumstances modify the absorption of medicines, and how do they affect it?

3. How do stimulants affect the various organic functions, and how do the various agents of this class differ in therapeutical results?

4. What are the arguments for and against the necessity of medicines passing through the circulation before exercising a remote action?

5. How are the chief pathological alterations of the blood susceptible of modification by remedial agencies?

6. How do diuretics affect the removal of abnormal collections of fluid in the organism?

7. In what cases can we expect useful results from the administration of emmenagogues with a view to restore deficient or suppressed menstruation?

MATERIA MEDICA.—SCHOLARSHIPS OF THIRD YEAR.

1. Describe the reactions which take place in the preparation of Chloroform.

2. How does the physiological action of Tartar emetic differ from that of Sulphate of Zinc?

Appendix D.

Examination Papers for Scholarships.

3. Opium: Mode of obtaining; physiological action; therapeutical uses; action of its active constituents; doses of these and their preparations.

4. Describe the physiological action; and specify the therapeutical applications of the preparations of bismuth.

5. What is the test for rhubarb?

6. Muriate of Ammonia: Chemical composition; tests; physiological action; therapeutical uses; doses; correctives; modes of administration.

7. What are the more common adulterations of sulphate of quinine, iodide of potassium, and sulphuric ether; and how are they detected?

PROFESSOR PURCELL O'LEARY, *Examiner.*

Appendix E.

APPENDIX E.

Table giving List of Classes, No. of Lectures, and Students attending same.

TABLE giving LIST of CLASSES, NUMBER of LECTURES, and of STUDENTS attending same.

	No. of Lectures Weekly.	No. of Students.	No. of Lectures.
Greek,	10	49	253
Latin,	9	45	211
English Literature,	3	14	61
,, Language,	3	37	26
History,	3	7	64
French,	9	89	225
Mathematics,	9	57	187
Chemistry,	3	68	70
Practical Chemistry,	7	30	45
Natural Philosophy,	14	82	260
Natural History,	3	57	75
Political Economy,	3	5	24
Geology and Mineralogy,	3	11	72
Logic,	8	13	36
Metaphysics,	3	4	60
Engineering,	12	28	269
Anatomy and Physiology,	5	96	108
Practical Anatomy,	5	57	
Surgery,	3	28	64
Midwifery,	3	25	58
Medicine,	3	36	59
Materia Medica,	3	29	74
Medical Jurisprudence,	4	31	36
English Law,	9	14	72
Civil Law,	6	11	48

Appendix F.

APPENDIX F.

Form of Circular from President, and special Reports of the Professors.

SPECIAL REPORTS of the PROFESSORS, with FORM of CIRCULAR from PRESIDENT.

RETURN to be filled up by the Professor of , and to be returned to the Registrar, so filled up, for the official information of the President, on or before the , being for the Collegiate Session, 186 –6 .

A.—As to the Course or Courses of Lectures given by the Professor. 1st. Duration and extent of the Course; number of Terms. 2nd. Number of weeks of Lectures in each Term. 3rd. Number of Lectures weekly, and days and hours of Lectures.

B.—The description or title of the Course or Courses of Lectures delivered, and a general abstract of the subjects of instruction contained in the Course, and the title of the Text-books recommended.

Appendix F.

Form of Circular from President, and special Reports of the Professors.

C.—Whether the Lectures are illustrated by reference to maps, diagrams, specimens, or experiments; and a general notice of the kind of illustrations used.

D.—Whether any method of Tutorial, or other special instruction, is employed, as by setting out portions of Text-books for lessons, by themes, or exercises in composition, or problems; and whether Special Class Examinations are held, and at what time; or whether Herborization Excursions, or Field Exercises, are given.

E.—What Faculties or division of Students are those attending Courses of Lectures of the Professors making the return.

F.—The number of Students attending each Course—distinguishing Matriculated and Non-Matriculated Students; and the general regularity of attendance.

G.—The general conduct of Students at the Professor's Lectures; and the general state of discipline as regards the Professor's Classes.

H.—The general condition of the department of which the Professor has charge, as to supplies, fitments, cleanliness, and accommodation, for the purposes of instruction.

The Professor, in making the above returns, is requested to mark the answers with the letter designating the portion of the form of return, as above, to which each answer refers.

Signed by order of the President,

, *Registrar.*

RETURN OF THE PROFESSOR OF GREEK.

A.—1. The course extended over three terms. 2. The first term contained 7 weeks of lectures; the second, 13; and the third, 5. 3. Ten lectures were given weekly, viz., 2 on each day, except Saturday.

B.—The Greek language and literature, portions of Plato, the Greek tragedians, Homer, Thucydides, and Demosthenes were read in class.

C.—The lectures were illustrated by maps hung on the walls of the lecture-room.

D.—Portions of the authors read were prepared by the students in the intervals between the lectures, in which they were examined. Exercises in prose and verse were required, according to the proficiency of the students.

E.—The students belonged exclusively to the Faculty of Arts.

F.—The lectures were attended by fifty students, all matriculated.

G.—The general conduct of the students was satisfactory, and the discipline good.

H.—The general condition of the department as to supplies, fitments, cleanliness, and accommodation was satisfactory.

JOHN RYALL, *Professor.*

REPORT of the PROFESSOR of LATIN for the SESSION 1867–8.

A.—The course extended through three terms. First term, 8 weeks; second term, 11 weeks; third term, 5 weeks. Junior class, 4 lectures weekly; senior class, 3 lectures weekly; extra and third year's class, 2 lectures weekly.

B.—The Latin language. Junior class: Livy, part of Book XXIII.; Horace—Satires, Book II., 1–3. Senior class: Juvenal—Satires, 10–12; Cicero—De Officiis, part of Book I. Extra and third year's class: Lucretius, part of Book II.; Tacitus—Histories, part of Book II.

Appendix F.
Reports of the Professors.

C.—The lectures were illustrated by references to the art collections belonging to the college.

D.—The students prepared a portion of the text-book for each lecture; they also wrote Latin exercises in prose and verse.

E.—Students in Arts.

F.—Forty-five, all matriculated.

G.—Satisfactory.

H.—Satisfactory.

B. Lewis.

Professor's Return in History and English Literature.

A.—1. History; two terms. English Literature; two terms. English Language; one term. 2. First term, 9 weeks; second term, 12 weeks. 3. Three lectures a week in each subject, namely:—History—Monday, Wednesday, and Friday, 12–1. English Literature—Tuesday and Thursday, 12–1; Saturday, 11–12. English Language—Tuesday and Thursday, 11–12; Saturday, 10–11.

B.—History—France: 1589–1815. Great Britain and Ireland: 1589–1815. English Literature—History of English Poetry from Chaucer to Pope. Chaucer: Canterbury Tales, Prologue. Shakespeare: Othello. Exercises: Analysis of Burke's Reflections on the Revolution in France. English Language: Craik's Outlines of the History of the English Language. Milton: Paradise Lost, Book I. Shakespeare: Richard III.

C.—The lectures on History are illustrated by reference to Bell's Historical Tables, and Von Spruner's maps.

D.—Tutorial instruction is given upon the authors appointed to be read. Lectures are delivered upon History and Literature. Exercises in Analysis. Translations: Original Essays.

E.—Arts and Medicine. Matriculated.

F.—History, 7 students. English Literature, 14. English Language, 26. Attendance regular.

G.—Conduct good.

H.—Satisfactory.

William Rushton, *Professor.*

Return for the official information of the President for the Collegiate Session, 1867–68.

A.—There were three courses of lectures given by the Professor of modern languages on the French language and literature. The first course for medical students; the second (senior French), for arts and engineering students; the third course (junior French) also for arts and engineering students.

1st. The three courses extended over three terms, namely, the whole Session.

2nd. The first term comprised 9 weeks; the second, 13; and the third, 6 weeks.

3rd. There were three lectures weekly in each course, from 12 to 3; Mondays, Wednesdays, Fridays.

B.—The courses of lectures were on Syntax, comparative Grammar, French Literature; the text-books were, in the medical French class, Achille Comte's "Lectures sur les Sciences," "Litterature Medicale" *de Baratte;* in the Senior French class, Racine's "Britannicus," Lafontaine, Pascal, Demogeot's "Litterature Française;" in the Junior French class, Demogeot's "Litterature," Racine's "Britannicus," Molière's "l'Avare."

C.—The lectures require no diagrams, &c.

D.—Both the tutorial and professorial methods were combined; exercises and compositions required weekly, with occasional examinations.

E.—The students belonged to the Faculties of Arts and Medicine, and the Engineering school.

F.—The number of students in the Medical French class was 51; in the Senior French class, 25; and in the Junior French class, 14. (76 lectures in each course). The general attendance satisfactory.

G.—The general conduct of the students was very good.

H.—The general accommodation and condition of the rooms was excellent.

R. de Vericour.

Report of the Professor of Logic and Metaphysics.

A.—On Logic and Metaphysics.—1. Logic, one term; Metaphysics, 2 terms. 2. Two terms. Logic, Tuesdays, Thursdays, at 11 o'clock; and Saturdays at 9 o'clock. Metaphysics, Tuesdays and Thursdays, at 1 o'clock; Saturdays, at 10 o'clock.

B.—Logic, Deductive and Inductive—Aldrich, parts of Mill, Baynes,and Thompson. Metaphysics: History of Philosophy and Psychology; History of Philosophy of the University of France.

C.—No illustrations are used except such as are drawn or written on the board during the course of the lectures.

D.—Both the tutorial and professorial systems are used.

E.—Logic, second year's students in Arts; Metaphysics, third year's students in Arts.

F.—Logic, 13; Metaphysics, 4. All matriculated; attendance very satisfactory.

G.—Conduct of the students in the class-rooms unexceptionable.

H.—The inconvenience previously complained of has been remedied by a re-arrangement of the rooms, but a few fitments are still required.

G. S. Read.

Report of the Professor of Mathematics for Session 1867–68.

A.—1. The course consisted of three terms.

2. The first term contained 7 weeks, the second 13 weeks, and the third 5 weeks.

3. The regular lectures were given on Mondays, Wednesdays, and Fridays from 12–1, for 1st year; 1–2, for 2nd year; 2–3, for 3rd year.

There were also optional lectures during the second term for first year's students on Tuesdays and Thursdays, from 12–1.

B.—Subjects of lectures were:—1. *First year*—Euclid, Algebra, Trigonometry. 2. *Second year*—Spherical Trigonometry. Properties of Elementary Solid Figures. Analytical Geometry, Differential and Integral Calculus. 3. *Third year*—Solid Geometry, Differential Equations, Calculus of Variations.

The text-books recommended were:—Euclid; Todhunter's Algebra, Trigonometry—(1. Plane—2. Spherical), Conic Sections, Differential Calculus, Integral Calculus. Salmon's Conic Sections and Solid Geometry. Frost and Wolstenholme's Solid Geometry. Poole's Differential Equations.

C.—No special illustrations.

D.—The lectures, except those on Euclid, were to a certain extent independent of text-books. Problems were set at each lecture, and frequent *viva voce* examinations held. There were also written examinations at natural divisions in the course.

Appendix F.

Reports of the Professors.

E.—The students attending lecture were of the Arts and Engineering Faculties.

F.—They (in number 57) were all matriculated. Attendance was somewhat irregular.

G.—Conduct, &c., satisfactory.

H.—Fitments, &c., were satisfactory, except that it is desirable to have the lecture-room heated otherwise than by the stove.

C. NIVEN, *Professor of Mathematics.*

REPORT OF THE PROFESSOR OF NATURAL PHILOSOPHY.

A.—Five courses. 1. Each, 3 terms. 2. In the first term lectures were delivered during 7 weeks; in the second, 12 weeks; and in the third, 5 weeks. 3. In the senior class of Experimental Physics and the Honor Class in Mathematical Physics, 3 lectures were delivered in each week; in each of the other classes 2 lectures in each week.

B.—In the classes of Experimental Physics the subjects were—The Elements of Mechanics and Hydrostatics, Heat, Light, Electricity, and Acoustics; in Mathematical Physics—Mechanics, Hydrostatics, Optics, and Astronomy. In Engineering Physics—Practical Mechanics and Theory of the Steam Engine. Text-books—Ganôt, "Traite de Physique;" Todhunter's "Statics," Tait and Steel's "Dynamics," Brinkley's "Astronomy," Parkinson's "Optics," Twisden's "Practical Mechanics," De Pambour's "Theory of the Steam Engine."

C.—The lectures were illustrated by experiments and diagrams.

D.—In Mathematical and Engineering Physics the tutorial method was used and problems proposed as exercises.

E.—The senior class of Experimental Physics was attended by students of the second year in Arts and the second year in Engineering. The Honor course in Mathematical Physics by students of the third year in Arts and third year in Engineering; the class of Engineering Physics by students of the third year in Engineering; the junior class of Experimental Physics by students of the first year in Medicine.

F.—Senior Class of Experimental Physics, 26; Junior, 53; Mathematical Physics (Honor), 2; Mathematical Physics (Engineering), 3; Engineering Physics, 4. The attendance was regular.

G.—The conduct of the students was satisfactory.

H.—The arrangements for carrying on the business of the department were satisfactory.

JOHN ENGLAND.

REPORT OF THE PROFESSOR OF CHEMISTRY.

A.—First course of 3 terms; first term of 7 weeks; second of 13 weeks; and third of 5 weeks. Three lectures per week, on Monday, Wednesday, and Friday, from eleven to twelve.

B.—First course; Systematic Chemistry, embraced the laws of combination; history of metallic and non-metallic substances; theories of organic Chemistry, and description of organic compounds. Text-books—Fownes, Graham, Kane, Miller, Regnault, Williamson, Roscoe. The second course was conducted in the laboratory.

C.—Illustrated by diagrams, specimens, and experiments.

D.—In the first course by lectures, and by explanations of difficulties after lectures to students. In the second course, each student works under the superintendence of the Professor.

E.—Students of the Faculties of Medicine, Engineering, and a few from Arts attend the first course. Medical students alone attend the second.

F.—In the first course, 64 matriculated and 4 non-matriculated; and in the second, or Practical Chemistry, 28 matriculated and 2 non-matriculated. The general attendance was good.

G.—The general conduct was good, except in the case of five students, who were brought before the Council.

H.—The department is well provided with supplies, fitments, and apparatus for instruction. The ventilation of the laboratories to which the attention of the Board of Works has been for years directed by the Council of the College has not yet been attended to in a proper manner, and is at present positively injurious to the health of students and Professors. The pressure of gas is also most insufficient during the day for the work of the laboratory.

J. Blyth, M.D.

Report of the Professors in charge of the Class of Medical Jurisprudence.

A.—Three months, during which 36 lectures were delivered. The days of lecture were Tuesday, Thursday, and Friday.

B.—The subjects chiefly enlarged upon were toxicology, the rules of evidence in legal procedure, infanticide, wounds, insanity, &c. The text-books—Taylor, Guy, Beck; Paris and Fonblanque were also recommended for perusal by the students. The leading cases were referred to; for example, Lord Ferrer's case, the Duchess of Kingston's case, Hadfield's case, the Gardner and Douglas Peerage case, &c.

C and D.—By experiments, and lectures illustrated by them.

E.—Students of the Faculty of Medicine.

F.—There were 29 matriculated, and 2 non-matriculated in the class.

G.—The attendance, conduct, and discipline of the class were excellent.

H.—The class continues dependent on the Chemical department for apparatus and the materials necessary for the toxicological portion of this course.

J. Blyth, M.D.
Michael Barry, B.L.

Report of the Professor of Natural History.

A.—One course on Zoölogy and Botany. 1. The course consisted of 75 lectures, and extended over 3 terms. 2. The first term included 9, the second 12, and the third 5 weeks of lectures. 3. Three lectures weekly, at 3, P.M., on Mondays, Wednesdays, and Fridays.

B.—The course embraced lectures on the principles of Zoölogy and Botany, and on the Structure and Classification of Plants and Animals. The text-books used were Milne Edwards' Zoölogy, Dallas' Natural History of the Animal Kingdom, and Henfrey's Elementary Course of Botany.

C.—The lectures were illustrated by reference to specimens and diagrams. Herborizations were given during the third term.

D.—The professorial method of instruction was chiefly employed.

E.—The lectures were attended by students of the third year in Arts, and of the first year in Medicine; also, by non-matriculated students.

F.—Five students in Arts, 44 in Medicine, and 8 non-matriculated students attended with more than usual regularity.

G.—Satisfactory.

H.—As stated in last Report. As the Examination Hall has now been heated by hot water pipes, it is hoped that the same advantage, with as little delay as possible, may be extended to the Museum.

J. Reay Greene.

Appendix F.

Reports of the Professors.

Report of the Professor of Mineralogy and Geology for the Session 1867–68.

A.—The course of lectures given by the Professor extended over the three terms of the College Session; during the first term, 26; during the second term, 26; and during the third term 20 lectures were given. The number of lectures delivered weekly was 3, the days being Tuesdays, Thursdays, and Saturdays; the hours on Tuesdays and Thursdays being from 2 to 3, P.M.; and on Saturdays, 10 to 11, A.M.

B.—The course of lectures included Physical Geography, Mineralogy, Geology, and Palæontology, the books recommended being Hughes' Outlines of Physical Geography, Somerville's Physical Geography, Herschell's Physical Geography, Nicols' Manual of Mineralogy, Lyell's Elements and Principles of Geology, Jukes' Manual of Geology, Murchison's Siluria, and Owen's Palæontology.

C.—Maps, sections, diagrams, and specimens were used to illustrate the several lectures.

D.—The mode of instruction was professorial; field instructions were also given towards the end of the course.

E.—With the exception of one Arts student, the course was attended by students appertaining to the Department of Engineering.

F.—The number attending the course was 11, being, with the exception of the one before alluded to, all Engineering students of the first year, and the attendance was, on the whole regular.

G.—The conduct of the students during lectures was very good.

H.—The department over which the Professor has control is well supplied with fitments and other requisites; and, as regards cleanliness and accommodation, these are in every respect what the Professor could require.

Robert Harkness.

Special Report of the Professor of Geology and Mineralogy in accordance with Statutes, Chapter V., for the Information of the College Council, and communicated to the President.

The Professor of Geology and Mineralogy has to report, for the information of the Council, that since May, 1868, there have been added to his departments in the Museum a collection of fossil fish from the Newcastle coal-field, presented by T. P. Barkers, esq., which has been arranged and mounted, and is now in its proper place in the Palæontological Collection; and a series of fossils from the Norwich Crags, which has been purchased from Mr. J. E. Taylor of Norwich. This also has been arranged and mounted, and in connexion with the fossils from the Red and Coralline Crags, forms a very perfect illustration of the Pliocene fauna now in the Museum.

The whole of the British Palæontological collection is now arranged and catalogued. There are, however, some gaps in this collection which require filling up. Among these are the Devonian and Permian formations; and whenever funds are available these deficiencies will be supplied.

With regard to the mineralogical collections, these remain in the same condition as before. There has been no addition thereto, nor have losses been sustained in connexion with this department.

Robert Harkness.

May 25th, 1869

Report of Professor of Civil Engineering.

A.—1. Each course of lectures extends through the three terms. 2. In the first term, 9 weeks; second. 13; third, 5. 3. Three lectures per week in each course. Students of first year, Monday, Wednesday, Friday, 10, A.M.; second year, Tuesday, Thursday, Saturday, 10, A.M.; third year, Monday, Wednesday, Friday, 12, noon. Office open Tuesday, Thursday, Saturday, from 10, A.M. to 2, P.M.

Total number of lectures:—

Students of first year, . . .	66
,, second year, . . .	64
,, third year, . . .	69
In office, ...	70
Total, . . .	269

B.—*First year.*—Descriptive Geometry; Orthographic Projection; Shadows; Isometric Projection; Perspective; Principles of Architecture; Geometry of the Oblique Bridge. Text-books:—Hall's Descriptive Geometry; Engineer and Machinist's Drawing Book; Rickman's Architecture; Buck on the Oblique Bridge. *Second year.*—Surveying, Levelling, and Mensuration. Text-books:—Rankine's Civil Engineering; Cotton's Manual of Railway Engineering; Williams' Geodesy. *Third year.*—Materials used in Construction; Principles of Construction of Bridges, Roads, Railways, Canals; Hydraulic Engineering; Strength of Materials; Principles of Construction of the chief machines employed by the Engineers. *Drawing office.*—First year students are chiefly employed in drawing the problems given at lectures, and a few easy examples of their application. The second and third year's classes in making working drawings of examples of the subjects of lectures, and in mapping.

C.—Illustrated by reference to maps, drawings, and instruments.

D.—The tutorial and professorial methods of instruction are adopted, according to the subject of the lecture. Instruction is given in the field.

E. Students in the department of Civil Engineering.

F. Students of first year, . .	Mat.	10	.	Non. Mat.	0
,, second year, . .	,,	14	.	,,	0
,, third year, . .	,,	5	.	,,	0
		29			0

The majority of the students have attended tolerably regularly.

G. Conduct of students very good.

H. General condition of department good.

Alexander Jack.

A.—1. Political Economy, 26 lectures; 2 terms. 2. Jurisprudence, 24 lectures; 2 terms. 3. Civil Law, 24 lectures; 2 terms.

B.—Political Economy—Rent, profit, and wages; commerce, taxation, currency, and banking. Text-books—J. S. Mill, Fawcett, Senior, Mills. Jurisprudence—Selections from the writings of Maine, Stephens, and lectures of the Professor. Civil Law—Sandars' Justinian.

C.—No.

D.—The tutorial and professorial methods are both employed.

E.—In Political Economy, Arts Students; in other subjects, Law Students.

F.—In Political Economy, six matriculated. In Jurisprudence, nine matriculated. In Civil Law, four matriculated.

G.—Very good.

R. H. Mills.

Appendix F.

Reports of the Professors.

Report of the Professor of English Law.

A and B.—Three courses of lectures, comprising twenty-four, were given to each of the classes of the first, second, and third years. The subjects were, as prescribed, real property and conveyancing to the class of the first; personal property, equity, and the bankruptcy law to the second; and common and criminal law to the class of the third year. The text-books used in the several classes were Williams on Real Property, Williams on Personal Property, Smith on Contracts, Smith's Manual of Equity Jurisprudence, Smith's Leading Cases; Blackstone's Commentaries, and the several other books mentioned in the College prospectus were recommended for perusal.

C.—The subjects were elucidated by precedents, and as far as possible by practical cases and references to cases reported in the several law and equity reports.

D.—Tutorial, by the examination of precedents, &c., and by oral examination.

E.—Arts and Law.

F.—Fifteen. Nine in the class of the first year, four in the class of the second year, one in the class of the third, and one in the class of the fourth year.

G.—The conduct and attendance of the students were very good.

H.—Nothing occurs to me material to report in answer to this inquiry.

Michael Barry.

Report of the Professor of Anatomy and Physiology for Session 1867–68.

A.—Two courses delivered daily (Saturday excepted) during the Medical Session: Anatomy and Physiology at one o'clock; Anatomical Demonstrations at twelve o'clock.

B.—One course entitled Anatomy and Physiology; the other course, Anatomical Demonstrations and Practical Anatomy. The dissections performed by the students are superintended by the Professor of Anatomy and by his assistants, Doctors Shinkwin and Jones, Demonstrators of Anatomy.

The course of Anatomy and Physiology comprehends the following subjects:—1. Nature of life and organization; general description of the vital functions; general and special description of the textures of the human frame; development of tissues and other branches of Histology; composition of the fluids, viz., the blood, lymph, chyle, saliva, gastric juice, bile, &c. 2. Physiological Anatomy of the organs of support and locomotion, circulation, respiration, digestion, chylification, absorption, secretion, excretion, reproduction; the brain and its membranes; the spinal cord and membranes; the ganglia and nerves; the organs of touch, smell, vision, hearing, taste; organ of voice, &c. 3. The course comprehends all branches of human Physiology; various subjects comprised in it are elucidated by reference to Comparative Anatomy and Physiology.

The course of Structural Anatomy is illustrated by microscopical preparations, &c.

The course of Anatomical Demonstrations includes the special description of the bones, joints, ligaments, arteries, veins, membranes, and fasciæ; it also embraces Regional and Surgical Anatomy.

The text-books are the following, viz.:—Todd and Bowman on Physiological Anatomy; Carpenter's Physiology; Valentin's Physiology; Kirke's Handbook of Physiology; Quain's Anatomy; Harrison's Anatomy; Gray's Anatomy; Ellis's Demonstrations; Corbett on the Arteries, &c.; Kölliker and Hassal on Microscopic Anatomy.

C.—The lectures are illustrated by recent and prepared dissections; by plates, diagrams, and anatomical preparations, &c.

D.—The students are examined *viva voce* upon subjects treated of in the course. Written replies to questions proposed are always received at the examinations held in October for Medical Scholarships, and at the Sessional Examinations in May.

E.—By students of Medicine and Surgery.

F.—The course of Anatomy and Physiology was attended by 96 students, 90 matriculated, 6 non-matriculated.

The course of Demonstrations and Practical Anatomy by 57 matriculated and 4 non-matriculated students.

G.—The students have attended the lectures with great regularity, and their conduct was exceedingly good.

H.—The Anatomical preparations, plates, charts, &c., are very good, but there is much necessity for additions to the Anatomical Museum.

Accommodation has recently been much improved; the apartments are kept in a state of cleanliness.

J. H. Corbett.

Report of the Professor of Materia Medica.

A.—One six months' course. Three lectures weekly, on Tuesdays, Thursdays, and Saturdays, from 3 to 4 P.M.

B.—Lectures on Materia Medica and Therapeutics, comprising general Jamatology, Pharmacognosy, Pharmaco-dynamics, Pharmacy, Formulation and Posology. Hygiene and Balneology. Text-books—Pereira, Garrod, Frazer, Trousseau, and Pidoux's works.

C.—Illustrated by diagrams, chalk drawings on the board, and microscopical demonstrations.

D.—By microscopical demonstrations and exhibition of specimens of the Materia Medica from the College Botanical Garden.

E.—Students of the Medical Faculty.

F.—Forty-two students.

G.—Conduct most admirable; class extremely attentive.

H.—Lecture-room unfitted. Fireplace and windows in the wrong place. Great want both of materials for experiment and suitable apparatus, as well as of a special porter to assist in preparing the experiments.

Purcell O'Leary, B.L., A.M., M.D.

Report of the Professor of Midwifery.

A.—Course of lectures on Midwifery.

1. Six months from November to April.
2.
3. Three lectures weekly, Monday, Wednesday, and Friday, at 4 o'clock.

B.—Midwifery. Physiology of the function of reproduction and gestation. Parturition in its various bearings, theoretical and practical. Diseases of childbed. Management of infants.

C.—Diagrams, casts, models, anatomical and other preparations, &c.

D.—

E.—Students of the Faculty of Medicine.

F.—Matriculated, 25; non-matriculated, 1. General attendance good.

G.—General conduct of the students very good.

H.—Supply of preparations, &c., for the illustration of the lectures still far from complete.

J. R. Harvey.

Appendix F.

Reports from Professors.

REPORT of the PROFESSOR of SURGERY.

A.—1. Duration of course three terms.

3. Three lectures weekly, from four until five, P.M.

B.—On theory and practice of Surgery and operative Surgery. Books—Cooper's Dietaries; Erichesen, Paget, Holmes, Smith.

C.—Diagrams; specimens; practical demonstrations on subjects; instruments.

D.—Occasional examinations.

E.—Medical students.

F.—Matriculated, 26; non-matriculated, 4.

G.—Students' conduct and discipline excellent without exception.

H.—Condition of department extremely defective as to supplies, fitments, cleanliness; smell from dissecting-room during class hours is almost pestilential.

W. K. TANNER, M.D.

REPORT of the PROFESSOR of PRACTICE of PHYSIC.

A.—Lectures on the Practice of Physic, delivered from November 1st to 30th April—three terms first six weeks; the second and third varying with the time of Easter. Three lectures each week from three to four o'clock.

B.—The course embraces all the subjects of Internal Pathology, with the treatment and causes of the various diseases.

C.—Illustrated by pathological specimens and plates.

D.—The students are examined from time to time on the subjects of the course of lectures.

E.—Students of the Faculty of Medicine.

F.—Attended by 34 matriculated and 3 non-matriculated students.

G.—Nothing can exceed the good conduct and discipline of the students.

H.—There is a deficiency of the pathological specimens caused by the burning of the College.

DENNIS CHARLES O'CONNOR, A.B., M.D.

Appendix G.

List of successful Candidates.

APPENDIX G.

LIST of UNIVERSITY DEGREES, DIPLOMAS, and HONORS obtained by STUDENTS of QUEEN'S COLLEGE, CORK, at the COMMENCEMENTS in JUNE and OCTOBER, 1868; also the PEEL EXHIBITIONS.

LIST of DEGREES and DIPLOMAS conferred by the QUEEN'S UNIVERSITY of IRELAND in 1868, on STUDENTS from QUEEN'S COLLEGE, CORK.

DEGREE OF LL.D.

Sir Robert Kane, University of Dublin, *ad eundem.*
Owen Connellan, *Honoris Causa.*

DEGREE OF M.D.

Unclassed:
John M'Mahon Brown.
James M. Beamish, M.A.
James Chatterton, B.A.
Wm. B. Coghlan, M.A.
Timothy Crowley.
Humphry Donovan, B.A.
John Donovan.
James T. Fox.
Denis Harrington.
R. A. Jamieson, M.A.

Unclassed—*continued.*
John Lloyd.
Thomas Lumsden.
Edward M'Carthy.
Richard A. Mowle.
Patrick Murphy.
Wm. F. Newsam.
Richard R. O'Brien.
Michael O'Mally.
Patrick L. Walsh.

DEGREE OF M.A.

Second Class Honors:—Arthur H. Anglen, second rank in Mathematical Science.

DEGREE OF M.CH.

James M. Beamish, M.A.
James Chatterton, B.A.
John Donovan.
Richard A. Mowle.
John Lloyd.
Patrick Murphy.
Richard O'Brien.
Charles J. Purcell.
Wm. N. Robinson.
Patrick L. Walsh.

DEGREE OF B.A.

First Class Honors:—Joseph O'Brien, first in Ancient Classics.

Second Class Honors—
Charles H. Haines, second in Experimental Physics.
Richard Henry, second in Natural Sciences.

Third Class:—
Maurice C. Daly, third in Modern Languages.
Daniel N. Martin, third in Experimental Science.

Unclassed:—
Robert Allen.
Matthew J. Bourke.
Charles H. Crookshanks.
Unclassed—*continued:*
Thomas H. Gillman.
Bernard O'Connor.

BACHELOR IN ENGINEERING.

Third Class:—Roderick W. Kane.

DEGREE OF BACHELOR OF ENGINEERING.

Unclassed:—Robert A. Thompson.

FIRST UNIVERSITY EXAMINATION IN MEDICINE.

Unclassed.—
Robert Barry.
James M. Beamish, M.A.
Michael Cullinan.
J. T. Enright.
Richard Exham.
William J. Hastings.
Samuel Hawkes.
John R. Hayes.
James C. Holland.
Robert A. Jamieson, M.A.
Unclassed:—
Michael Kearney.
Christopher Lloyd.
Edward M'Carthy.
Daniel N. Martin.
R. W. O'Connor.
Augustine D. O'Connor.
John O'Neill.
William T. Sweetnam.
Frederick H. Smyth.
J. L. Sweetnam.

APPENDIX H.

SPECIAL REPORT of the LIBRARIAN.

The number of volumes in the Library at date of this Report, April 11th, 1869, is 18,974. They may be classified as nearly as possible as follows:—

Pure Mathematics,	701	Celtic Literature,	63
Mixed do.,	581	History,	2,508
Chemistry,	955	Biography,	546
Geology, &c.,	614	Geography, Travels, &c.,	602
Botany and Zoology,	1,488	Engineering,	477
Medical Sciences,	2,076	Agriculture,	210
Theology & Ecclesiastical History,	330	Fine Arts,	195
Logic, &c.,	424	Bibliography,	96
Political Economy and Jurisprudence,	530	Encyclopædias, &c.,	625
Education,	181	Total,	18,974
Law,	829		
Ancient Classical Literature,	1,863		
English Literature,	1,292	Increase in number of volumes over last report,	445
Modern European Literature,	1,508		

The Library is largely availed of by the students, whose conduct and demeanour are excellent. With one exception I have had no occasion to report a breach of library discipline. In this case the student was detected in stealing a book, and was expelled by the College Council.

Five text-books have been missed from the Library during the year. Three of them were traced to the student alluded to; the remaining two are still unaccounted for.

Appendix II.

Report of the Librarian.

The Consulting Library is now heated by hot water pipes, and the danger (from damp) to the property contained therein thereby removed.

I have completed a new catalogue of the general library which has met with the approval of the Council and Library Committee, and am at present engaged on a similar catalogue of the books contained in the Consulting Library, which number about seven thousand.

Cleanliness and order are properly attended to.

The College booksellers, Messrs. Hodges, Smith, and Foster, attend to our orders with promptitude and accuracy.

MATTHIAS O'KEEFFE, *Librarian.*

Appendix I.

Copies of Accounts furnished by Bursar.

APPENDIX I.

COPIES of the several ACCOUNTS furnished by the BURSAR, showing the FINANCIAL POSITION of the College to 31st March, 1869.

ACCOUNT of EXPENDITURE of the ANNUAL PARLIAMENTARY GRANT of £1,000 for the Year ending 31st March, 1869.

DR.	£	s.	d.
To amount of Grant received from the Paymaster-General,	1,000	0	0
,, amount received on account of College fees and fines,	75	15	0
,, Balance to credit of Bursar,	20	9	0
	£1,096	4	0

CR.			
By Balance to credit of Bursar from previous year,	275	3	3
,, Expenditure on the several College Departments:—			
1. Ancient and Modern Philology and Literature,	37	11	3
2. Mathematical, Physical, and Chemical Sciences,	9	2	9
3. Natural Sciences,	57	10	1
4. Engineering,	30	13	6
5. Medical Sciences,	37	12	5
6. Metaphysical, Legal, and Economical Sciences,	13	12	1
7. Printing, Stationery, Advertising, Postage, and Office Expenses,	290	11	1
8. Heating and Lighting,	182	14	10
9. Botanic Garden and Grounds,	161	12	9
	£1,096	4	0

GENERAL ABSTRACT of the ACCOUNT of the PRESIDENT or VICE-PRESIDENT, and BURSAR, of QUEEN'S COLLEGE, CORK, from 1st April, 1868, to 31st March, 1869.

DR. HEAD OF SERVICE (RECEIPTS).	£	s.	d.
To Balance on the 1st April, 1868,	1,200	10	0
,, Amount received from Paymaster of Civil Services,	8,589	5	9
,, Fees and Fines,	75	15	0
,, Balance,	25	0	0
,, Disallowed in April,	0	1	0
,, Asher and Co.,	0	2	0
,, Postage overcharge,	0	0	3
,, January, 1869,	1	0	0
	£9,891	14	0

CR. HEAD OF SERVICE (PAYMENTS).			
By amount paid for Salaries,	5,741	13	6
,, ,, ,, Scholars and Prizes,	1,246	2	6
,, ,, ,, for Porters and Servants,	331	12	0
,, ,, ,, Additional Grant,	821	0	9
,, Error in Account,	3	10	0
,, Balance indebted on 31st March, 1869,	1,747	15	3
	£9,891	14	0

E. M. FITZGERALD, *Bursar.*

APPENDIX K.

Reports of Vice-President and Deans of Residences.

Report of the Vice-President on Discipline, Registrar's Return of Punishments, and Reports of the Deans of Residences for the several Religious Denominations.

Return to be filled up by the Vice-President and sent in to the Registrar for the official information of the President, on or before the 22nd day of February, for the Collegiate Session 1867–68.

A.—As to the state and efficiency of all the several departments of the College, to which the constant supervision of the Vice-President is directed by the statutes.

B.—As to the state of order and discipline in the College, to which the particular attention of the Vice-President is directed by the statutes.

Signed, by order of the President,

R. J. Kenny, *Registrar.*

Dr. Ryall.

Report of the Vice-President.

A.—The several departments of the College were in an efficient state.

B.—The discipline of the College was very good during the greater portion of the Session, but towards its close several cases of grave violation of discipline occurred, resulting in the expulsion of two students and the rustication of four others.

John Ryall.

February 16, 1869.

Return of Punishments during Session 1867–68.

Two students were rusticated for the Session for irregularity of conduct connected with the University examinations.

One student was fined 10*s.* for using insulting epithets to a College porter.

The same student was deprived of the last moiety of his scholarship and rusticated for a year, for disrespectful conduct when before the Council.

Three students were fined £5 each for having papers in the Examination Hall while under examination.

One student was expelled for having in his possession a Library book, from which the Library stamp was removed, and for the possession of which he could not account.

One student was expelled for having been convicted of an assault.

One student was rusticated for one year for having been implicated in the above assault.

Report of Dean of Residences for Students of the Established Church.

2, South Terrace, Cork,
February 25, 1869.

Sir,—I have received your letter informing me that the President desires to have my report as Dean of Residences during the past year. In reply I beg leave to say that I applied again to the Council last year to make some provision for religious instruction by allowing me the use of a lecture-room in the College, and that the Council refused my request. For nearly twelve years I have gathered the students as well as I could into a room provided by myself outside the College, and last year twenty-seven of the Established Church students attended my lectures every Saturday at four o'clock, p.m., more or less regularly. Of these gentle-

Appendix K.

Reports of Vice-President and Deans of Residences.

who gave me the opportunity of making their acquaintance I cannot speak too highly. Their general behaviour is excellent. Of the remaining fifty or sixty Established Church students I know nothing officially. I cannot but deeply regret that the Council of the Queen's College, Cork, refuses to admit the Deans of Residences inside the College to give religious instruction.

Your faithful servant,

GEORGE WEBSTER, D.D.

Chancellor of Cork, Rector of St. Nicholas,
Dean of Residences in the Queen's College,
and Examining Chaplain to the Lord Bishop of Killaloe.

R. J. Kenny, Esq.

REPORT of DEAN of RESIDENCES for STUDENTS of the PRESBYTERIAN CHURCH.

Sir Robert Kane.

SIR,—I have the honor to report that the Presbyterian students in attendance on the Queen's College, Cork, during the Session 1867–68 were young men of excellent character, of studious habits, and that they were attentive to their religious duties.

I am, yours very truly,

WILLIAM MAGILL,
Dean of Residences.

Cork, February 23rd, 1869.

Dublin: Printed by Alexander Thom, 87 and 88, Abbey-street,
For Her Majesty's Stationery Office.

THE REPORT

OF THE

PRESIDENT

OF

QUEEN'S COLLEGE, GALWAY,

FOR

THE YEARS ENDING 31ST MARCH, 1868 & 1869.

Presented to both Houses of Parliament by Command of Her Majesty.

DUBLIN:
PRINTED BY ALEXANDER THOM, 87 & 88, ABBEY-STREET,
FOR HER MAJESTY'S STATIONERY OFFICE.

1869.

CONTENTS.

Page

REPORT, ... 3

TABLE I.—Numbers and Religious Persuasions of Students who have entered the Queen's College, Galway, in each year from its opening, . . 3

TABLE II.—Numbers and Religious Persuasions of Students attending Lectures in the College, in each Session from its opening, ... 4

TABLE III.—Number of Students attending the Lectures of each Professor, in each year since the opening of the College, ... 5

TABLE IV.—Number of Lectures delivered by each Professor in each Session since the opening of the College, ... 6

APPENDIX:

APPENDIX 1:

Days and Hours of Matriculation and Scholarship Examinations, to be held in October, 1869, ... 9

General Regulations of the College; Lists of Officers; Courses for Matriculation and Scholarship; Exhibitions, &c., ... 10

APPENDIX 2:

Scholarship Examinations, 1867, ... 49

Sessional Examinations, 1867, ... 67

APPENDIX 3:

Scholarship Examinations, 1868, ... 81

THE REPORT

OF THE

PRESIDENT OF QUEEN'S COLLEGE, GALWAY,

FOR

THE YEARS ENDING 31ST MARCH, 1868 AND 1869.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

IN the accompanying tables (Nos. I. and II.) will be found the numbers of students who have entered the College, and attended its lectures, not only during the years on which I am reporting, but in each year since its opening.

I.—NUMBERS and RELIGIOUS PERSUASIONS of STUDENTS who have entered the Queen's College, Galway, in each year from its opening.

Session.	Matriculated Students.	Non-Matriculated Students.	Total.	Members of Established Church.	Roman Catholics.	Presbyterians.	Wesleyan Methodists.	Independents.	Various.	Total.
1849–50, . .	64	4	68	24	38	6	–	–	–	68
1850–51, . .	23	3	26	10	9	7	–	–	–	26
1851–52, . .	31	5	36	13	21	2	–	–	–	36
1852–53, . .	21	2	23	8	12	3	–	–	–	23
1853–54, . .	25	5	30	12	15	3	–	–	–	40
1854–55, . .	26	15	41	18	18	3	2	–	–	31
1855–56, . .	32	7	39	14	15	8	1	1	–	49
1856–57, . .	35	8	43	15	22	3	1	1	1	43
1857–58, . .	36	7	43	16	17	9	–	1	–	43
1858–59, . .	44	4	48	20	19	7	2	–	–	48
1859–60, . .	35	5	40	12	25	1	–	1	1	60
1860–61, . .	*59	1	60	13	33	12	2	–	–	60
1861–62, . .	†59	3	62	21	35	6	–	–	–	62
1862–63, . .	60	4	64	18	27	16	1	–	2	54
1863–64, . .	54	5	59	20	21	11	2	4	1	70
1864–65, . .	58	12	70	26	28	13	–	2	1	39
1865–66, . .	46	3	49	16	19	10	3	–	1	49
1866–67, . .	42	2	44	14	18	7	3	2	–	44
1867–68, . .	†44	3	47	14	20	11	2	–	–	47
1868–69, . .	‡56	4	60	20	24	15	1	–	–	60
Total, . .	850	102	952	324	436	153	20	12	7	952

* Including three who had previously been in attendance as non-matriculated students.
† Including one who had previously been in attendance as a non-matriculated student.
‡ Including two who had previously been in attendance as non-matriculated students.

II.—Numbers and Religious Persuasions of Students attending Lectures in the Queen's College, Galway, in each Session from its opening.

Session.	Matriculated Students.	Non-Matriculated Students.	Total.	Members of Established Church.	Roman Catholics.	Presbyterians.	Wesleyan Methodists.	Independents.	Various.	Total.
1849–50, . .	64	4	68	24	38	6	–	–	–	68
1850–51, . .	60	3	63	22	28	13	–	–	–	63
1851–52, . .	68	5	73	25	41	7	–	–	–	73
1852–53, . .	73	2	75	26	40	9	–	–	–	75
1853–54, . .	76	5	81	30	42	9	–	–	–	81
1854–55, . .	69	16	85	32	46	5	2	–	–	85
1855–56, . .	78	9	87	26	42	14	3	2	–	87
1856–57, . .	88	8	96	30	49	10	3	3	1	96
1857–58, . .	92	8	100	31	47	16	3	2	1	100
1858–59, . .	113	9	122	37	64	15	4	1	1	122
1859–60, . .	111	7	118	31	69	11	2	2	3	118
1860–61, . .	141	3	144	33	85	19	3	2	2	144
1861–62, . .	148	5	153	39	91	19	3	1	–	153
1862–63, . .	161	4	165	33	95	32	2	–	3	165
1863–64, . .	160	5	165	41	91	25	3	4	1	165
1864–65, . .	157	12	169	50	78	31	2	6	2	169
1865–66, . .	139	5	144	33	71	29	4	4	3	144
1866–67, . .	133	2	135	36	62	27	4	5	1	135
1867–68, . .	124	3	127	34	54	32	3	4	–	127
1868–69, . .	144	5	149	47	62	34	2	4	–	149
Total, . .	2,199	120	2,319	660	1,195	363	43	40	18	2,319

In Tables III. and IV. the number of students attending the several classes, and the number of lectures given by each Professor in each session appear.

III.—Return showing the Number of Students attending the Lectures of each Professor, in each year since the opening of the College.

——	1849–50.	1850–51.	1851–52.	1852–53.	1853–54.	1854–55.	1855–56.	1856–57.	1857–58.	1858–59.	1859–60.	1860–61.	1861–62.	1862–63.	1863–64.	1864–65.	1865–66.	1866–67.	1867–68.
Greek,	50	31	24	19	24	21	21	23	21	23	24	24	36	36	35	30	34	24	25
Latin,	50	27	24	22	21	19	20	23	21	22	23	24	29	35	36	32	33	29	23
Mathematics,	54	38	28	28	27	28	25	34	34	42	35	42	48	52	41	43	40	37	27
English, &c.,	47	43	28	23	23	22	22	27	20	31	22	29	24	38	39	30	22	23	22
Modern Languages,	54	23	23	19	25	37	29	34	30	38	52	70	77	76	71	78	72	65	60
Celtic Languages,	–	3	2	2	–	–	–	–	3	–	3	6	–	–	–	–	–	–	–
Natural Philosophy,	8	11	23	19	27	23	21	27	29	38	33	70	57	67	62	68	54	49	50
Natural History,	3	26	25	21	32	25	30	30	32	37	37	39	32	33	29	38	32	27	34
Logic and Metaphysics,	–	20	17	14	14	14	13	14	15	16	17	19	21	23	25	30	20	16	23
Chemistry,	13	25	36	29	27	23	29	40	40	49	53	60	57	46	52	52	44	48	46
Mineralogy and Geology,	–	4	14	15	10	14	10	8	15	16	17	–	6	10	5	6	6	7	4
Engineering,	2	10	11	13	10	11	9	10	15	18	12	21	18	21	17	16	17	–	13
Agriculture,	4	5	5	5	6	6	7	11	14	7	7	5	3	5	2	–	–	–	–
Anatomy and Physiology,	10	9	8	15	18	13	22	35	39	47	52	71	68	65	56	54	53	53	54
Materia Medica and Medical Jurisprudence,	–	5	9	11	10	7	8	17	13	24	20	26	34	28	32	23	18	30	20
Surgery,	–	–	6	12	7	7	6	13	13	18	20	19	33	27	26	28	24	12	19
Midwifery,	–	–	4	7	4	–	4	3	11	5	11	12	14	17	12	14	14	9	8
Medicine,	–	–	–	4	4	2	6	6	7	7	6	8	16	21	26	19	15	10	15
English Law,	4	4	5	6	6	7	5	4	3	7	7	4	7	7	7	8	6	7	8
Jurisprudence and Political Economy,	4	4	12	13	16	10	9	9	7	17	13	10	5	9	8	8	10	12	14

IV.—Return of the Number of Lectures delivered by each Professor in each Session since the opening of the College.

	1849–50.	1850–51.	1851–52.	1852–53.	1853–54.	1854–55.	1855–56.	1856–57.	1857–58.	1858–59.	1859–60.	1860–61.	1861–62.	1862–63.	1863–64.	1864–65.	1865–66.	1866–67.	1867–68.
Greek,	265	254	216	224	248	249	217	262	223	246	210	229	*315	290	255	255	247	274	240
Latin,	270	252	212	238	233	190	217	244	195	189	189	196	181	263	228	237	236	248	224
Mathematics,	221	255	230	167	164	211	181	†186	†234	†233	†209	†210	†213	†199	†199	†213	†198	212	177
English, &c.,	37	28	77	97	126	128	127	107	100	92	97	76	16	160	147	145	136	155	156
Modern Languages,	212	249	207	175	155	160	155	†162	†154	†151	†169	†246	†244	†229	†284	256	†269	†163	†272
Celtic Languages,	–	90	65	30	–	–	–	‡3	48	–	30	24	–	–	–	–	–	–	
Natural Philosophy,	63	154	120	207	139	175	225	174	173	192	172	213	196	211	203	229	255	293	257
Natural History,	–	120	85	92	85	76	68	68	87	77	76	56	57	62	70	82	77	70	60
Logic and Metaphysics,	–	40	114	159	123	141	138	162	106	109	170	165	132	182	146	157	139	172	171
Chemistry,	32	111	128	140	113	123	97	101	107	98	100	95	91	95	89	87	102	94	97
Mineralogy and Geology,	–	51	45	57	51	50	45	49	60	64	64	§–	61	49	66	56	58	63	60
Engineering,	9	118	105	97	80	76	112	111	122	126	81	162	183	241	211	249	226	237	258
Agriculture,	–	106	112	160	144	160	192	174	123	154	182	83	65	54	28	–	–	–	–
Anatomy and Physiology,	111	112	111	108	100	115	104	103	102	104	‖116	‖96	‖90	‖84	‖105	‖118	‖86	‖137	‖116
Materia Medica and Medical Jurisprudence,	–	51	60	90	95	93	95	96	90	90	77	85	78	88	88	84	84	81	79
Surgery,	–	–	61	62	62	61	62	60	53	59	60	55	60	60	50	49	58	61	54
Midwifery,	–	–	59	70	62	–	62	61	60	59	54	51	60	51	54	51	51	55	53
Medicine,	–	–	–	64	62	61	62	60	60	58	62	55	49	50	50	49	51	54	55
English Law,	18	45	55	97	71	72	72	40	35	48	49	72	63	64	68	60	36	61	77
Jurisprudence and Political Economy,	20	48	60	96	106	95	60	52	51	97	49	61	60	67	83	70	53	73	85

* Exclusive of 72 lectures to extra classes.
† Exclusive of a Course of Lectures given by the Senior Scholar.
‡ These Lectures were open to the Public.
§ Owing to an alteration in the Ordinances of the University, no Lectures on Mineralogy and Geology were delivered this Session.
‖ Exclusive of Anatomical Demonstrations.

Having been prevented until very recently by an overwhelming calamity from preparing a report of the proceedings of this College for the session 1867–68, I deemed it advisable to incorporate it with my report for the present year. I am thereby enabled to announce a marked improvement in the prospects of the College by a large accession to the number of students entering, as well as attending lectures, in these two last sessions.

The entrances, which from causes alluded to in my last report, had fallen from 70 in 1864–65, to 44 in 1866–67, have risen in the present year to 60; and the attendances, which had fallen from 169 in 1864–65, to 135 in 1866–67, have increased in the present year to 149.

I do not entertain a doubt that the College will not only soon regain the position it held in 1864–65, but that each succeeding session will, as was the case till then, continue to exhibit an increase in the number of its students.

I am happy to say that since the date of my last report, one of our students obtained a distinguished place at the Indian Civil Service Examination; six others succeeded in gaining honourable places in the Public Works' Department of your Majesty's Indian Government; four others have gained Commissions in the Army Medical Service, in addition to several minor appointments obtained by former students of the College. I allude to these results because they are palpable and have attracted public notice, but I am not the less anxious to impress, that in the various circles of private enterprise the success of our students has not been less distinguished. These facts, together with high distinctions, gained at the University Examinations, furnish conclusive evidence of the ability and industry with which the several Professors discharge their duties, as well as of the intelligence, diligence, and attainments of the students.

Last autumn the usual triennial visitation was held in the College. Five of your Majesty's visitors attended, and expressed, through their President, His Grace the Archbishop of Armagh, their high approval of everything that came under their notice, as well as their entire satisfaction with the progress and condition of the institution.

It gives me pleasure to report that in no former sessions has the conduct of the students been marked by more propriety of demeanour, a stricter attention to discipline, and a greater devotion to their studies.

The gratification derived from the above circumstances is saddened by the loss we have sustained within a recent period by the premature deaths of Professors Bensbach and Bagley. The College has thus been deprived of two conscientious and energetic teachers, the body of Professors of two loved and faithful colleagues.

EDWARD BERWICK

President.

QUEEN'S COLLEGE, GALWAY,

March 31, 1869.

APPENDIX.

APPENDIX, No. 1.

QUEEN'S COLLEGE, GALWAY, 1869-70.

DAYS AND HOURS OF MATRICULATION AND SCHOLARSHIP EXAMINATIONS.
OCTOBER, 1869.

DAYS.	HOURS.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.
Tuesday, 19th Oct.	9—5		Supplementary Examinations.	Supplementary Examinations.
Wednesday, 20th Oct.	9—5		Supplementary Examinations.	Supplementary Examinations.
Thursday, 21st Oct.	9–12		Lit. Schol.—Latin. Med. } Schol.—Chem. Engin. }	
	2—5		Lit. Schol.—Greek. Med. } Schol.—Chem. Engin. }	
Friday, 22nd Oct.	9–12	Matriculation.	Lit. Schol.—English. Eng. Schol.—Geom. Draw., &c.	
	2—5	Matriculation.	Lit. Schol.—English. Eng. Schol.—Geom. Draw., &c.	
Saturday, 23rd Oct.	9–12		Lit. Schol.—Latin. Med. Schol.—Nat. Hist.	
	2—5		Lit. Schol.—Greek. Med. Schol.—Nat. Hist.	
Monday, 25th Oct.	9–1	Lit. Med. } Schol.—English. Lic. in Arts Ex.	Med. Lit. } Schol.—Mod. Lang.	Engin. Schol.—Engin.
	2—5	Lit. Med. } Schol.—Greek.		Engin. Schol.—Engin.
Tuesday, 26th Oct.	9–12	Lit. Med. } Schol.—Latin.	Med. Schol.—Anat.	Engin. Schol.—Min. & Geol.
	2—5	Lit. Med. } Schol.—Greek.	Med. Schol.—Anat.	
Wednesday, 27th Oct.	9–12	Lit. Med. } Schol.—Latin.	Med. Schol.—Nat. Phil.	Engin. Schol.—Nat. Phil.
	2—5	Science Med. Engin. } Schol.—Math. Lic. in Arts Ex.	Science Engin. } Schol.—Math.	Engin. Schol.—Nat. Phil.
Thursday, 28th Oct.	9–12	Science Med. Engin. } Schol.—Math.	Science Engin. } Schol. Math.	Engin. Schol.—Math.
	2—5			Engin. Schol.—Math.

The Examination for the Third and Fourth Year Scholarships in MEDICINE will commence on Wednesday, the 27th October.

Arrangements will be made for holding the Examinations for Law Scholarships early in December.

Appendix, No. 1.

QUEEN'S COLLEGE, GALWAY.—Founded December 30, 1845.

This College is a Corporation, founded by Letters Patent under the Great Seal of Ireland, under the name and style of the "President and Professors of Queen's College, Galway."

The general government and administration of the College under the Statutes, and in cases not provided for by the Statutes, is vested in a Council consisting of the President, and six Professors elected by the Corporate Body.

Visitors.

His Grace the Lord Primate.
His Grace the Duke of Leinster.
The Right Honorable the Earl of Fingall, K.P.
The Right Honorable the Chief Secretary for Ireland.
The Right Honorable Maziere Brady.
The Right Reverend the Lord Bishop of Tuam.
The Most Reverend Archbishop M'Hale.
The Moderator of the General Assembly.
The President of the College of Physicians.
The President of the Royal College of Surgeons.

President.

Edward Berwick, B.A.

Council.—1868–69.

The President.
George J. Allman, LL.D.
Arthur H. Curtis, LL.D.
Thomas W. Moffett, LL.D.
James V. Browne, M.D.
Richard Doherty, M.D.
Edward Townsend, M.A.

Professors.

Greek,	D'Arcy W. Thompson, M.A.
Latin,	Richard Blair Bagley, M.A.
Mathematics,	George Johnston Allman, LL.D.
Natural Philosophy,	Arthur H. Curtis, LL.D.
History, English Literature, and Mental Science,	Thomas W. Moffett, LL.D.
Chemistry,	Thomas H. Rowney, PH.D.
Natural History,	Alexander G. Melville, M.D. Edin., M.R.C.S. Eng.
Mineralogy and Geology,	Wm. King, Cor. Mem. Nat. Hist. and Med. Soc. Dresden, &c.
Modern Languages,	Charles Geisler, PH.D.
Jurisprud. and Polit. Econ.	John E. Cairnes, M.A.
English Law,	William B. Campion, B.A.
Anatomy and Physiology,	John Cleland, M.D.
Practice of Medicine,	Nicholas Colahan, M.D., F.R.S., Edin.
Practice of Surgery,	James V. Browne, M.D., L.R.C.S.I.
Materia Medica,	Simon M'Coy, F.R.C.S.I.
Midwifery,	Richard Doherty, M.D., Hon. V.P., Obstet. Soc. Dub.
Medical Jurisprudence,	Simon M'Coy, F.R.C.S.I.
Civil Engineering,	Edward Townsend, M.A.

Office-Bearers.

William Lupton, M.A.,	Registrar.
George J. Allman, LL.D.,	Bursar.
John H. Richardson, B.A.,	Librarian.

Deans of Residence.

United Church of England and Ireland, ...	Rev. James O'Sullivan, M.A.
General Assembly of the Presbyterian Church in Ireland,	Rev. William Adair.
Wesleyan Methodist Church, ...	Rev. Mortlock Long.

The College Session.

The College Session is divided into three Terms.

The First Term of the Session 1868–9 commences on Tuesday, October 20, and ends on December 23, 1868.

The Second Term commences on January 5, and ends on Saturday, March 20, 1869.

The Third Term commences on April 5, and ends on Saturday, June 12, 1869.

The First Term of the Session 1869–70 commences on Tuesday, October 19, and ends on December 23, 1869.

Students.

Students are either Matriculated or Non-Matriculated.

Matriculated Students are required to pass an entrance or Matriculation Examination, and to pursue fixed courses of study.

Non-Matriculated are permitted to attend the Lectures of any of the Professors, without being required to pass the Matriculation or any other Examination.*

Matriculation.

Candidates for Degrees or Diplomas in the Queen's University, or for Scholarships, Exhibitions, or Prizes, in Queen's College, Galway, are required to pass a Matriculation Examination.

Students are admitted by examination to Matriculation in the Faculties of Arts, Law, and Medicine, and in the School of Engineering. In each Faculty and School special courses are prescribed for examination.†

The Matriculation Examination is held at the commencement of the first Term of each Session ; but additional Matriculation Examinations are held before the close of the Term.

The last Matriculation Examination for Students in the Faculty of Medicine is held on the 16th of November.

Candidates for Matriculation are required to appear in the Registrar's office before the Matriculation Examination for the purpose of entering their names on the College books.

Each candidate, before being admitted to the Matriculation Examination, is required to pay to the Bursar the Matriculation and College fee of ten shillings. This fee will be returned to such students as may fail to pass the Examination.

Attendance on Lectures.

Attendance upon Lectures is strictly prescribed to all Matriculated Students.

All Students shall pay the College Fee, and a moiety of their Class Fees, to the Bursar, and enter their names with the Registrar, before they are admitted to the classes of the several Professors.

The Registrar shall furnish to the Professors, before the commencement

* For further particulars of the status and privileges of Non-Matriculated Students, *vide* p. 15.

† *Vide* pp. 23, 33, 43.

Appendix, No. 1.

of Lectures in each Term, the rolls of their several classes, and from time to time such names as shall be afterwards entered with him.

No Student shall have his name replaced on the rolls of the Professors at the commencement of the second Term who has not paid the second moiety of his Class Fees.

Attendance on Lectures includes preparation for Lectures; and it is competent for a Professor who, on any occasion, is not satisfied with the preparation of a Student, to refuse him credit for attendance.

Attendance upon Courses of Lectures in the Faculty of Arts is recognised in cases where Students pass to a different Faculty or School.

In case of absence arising from illness or other unavoidable cause, the Student is required to lodge with the Registrar, immediately on recommencing his attendance, a letter or certificate explaining his absence, to be laid before the Council.

Examinations.

A General Sessional Examination is held at the close of each Session in the subjects upon which Lectures have been delivered during the Session. There is also a Supplementary Examination on the same subjects at the commencement of the following Session.

Every Matriculated Student in the Faculties of Arts and Law, and in the Schools of Engineering and Agriculture, must pass either the General Examination or the Supplementary Examination before his name can be entered on the College Register as having completed the Session; and no Student in these Faculties and Schools can be permitted to enter upon the Course of the succeeding year until he has so completed the previous Session.

No Student is admitted to the Sessional or the Supplementary Examination who has not kept the Courses of Lectures prescribed to Students of his class and standing.*

Scholarships.

Forty-six Junior and eight Senior Scholarships have been founded in the College.

Of the Junior Scholarships†—

Thirty, of the value of £24 each, are appropriated to Students pursuing the Course prescribed for the Degree of B.A.

Three, of the value of £20 each, to Students pursuing the Course for the Diploma of Elementary Law and the Degree of LL.B.

Eight, of the value of £25 each, to Students pursuing the Course for the Degree of M.D.

Five, of the value of £20 each, to Students pursuing the Course for the Diploma of Civil Engineering.

The Examinations for Junior Scholarships are held at the commencement of the First Term of the Session.

No Student is allowed to become a Candidate for a Junior Scholarship until he has paid the College Fee and one-half of the Class Fees for the current Session.

No Student is permitted to present himself as a Candidate for a Senior Scholarship who has not entered his name with the Registrar, and paid the College Fee to the Bursar.

All Senior Scholars in Arts are required to be in attendance in the College during their period of office.

* For University Examinations, see the "University Regulations."

† For the distribution of these Scholarships, the subjects of Examination, and the conditions upon which they are held, *vide* pp. 18–20, 24, 30–32, 35, 36.

Junior Scholars are exempted from the payment of one moiety of the Class Fees for the courses prescribed to Students of their faculty and standing. *Appendix, No. 1.*

No Student can hold the same Scholarship a second time.

No Scholarship will in any case be awarded, unless the Candidates are, in the opinion of the Examiners, sufficiently qualified in the prescribed courses.

Exhibitions.

The College is empowered to award Exhibitions, varying in value from £10 to £18, at the same Examinations as the Scholarships, and to be held upon the same terms.

Exhibitioners are required to pay the whole amount of the Class Fees for the Session.

No Student is allowed to compete for a Junior Scholarship or Exhibition in any course substantially the same as that in which he has already held a Scholarship or Exhibition.

No Student who has been awarded an Exhibition or Prize for answering in any of the courses for Senior Scholarships can a second time obtain a Scholarship Exhibition or Prize for answering in the same course.

All Junior Scholars and Exhibitioners are required to attend lectures, and pass the Sessional Examinations during their year of office.

Prizes.

The College is empowered to award Prizes, by examination, at the close of the Session, to the most distinguished answerers in the several courses of study pursued during the Session.

Two prizes for English prose composition, and two prizes for Geometry,* have been founded in the College, to be awarded annually at entrance:—first prize for English prose composition, £3 worth of books; second do., £2 worth of books: first prize for Geometry, £3 worth of books; second do., £2 worth of books.

All Candidates for Scholarships, Exhibitions, or Prizes, must have passed the Matriculation Examination in the Faculty or School to which the Scholarships, Exhibitions, or Prizes are attached.

Non-Matriculated Students.

Non-Matriculated Students are those who are permitted to attend the Lectures of any of the Professors without being required to pass the Matriculation or any other examination. They are required to pay to the Bursar the regulated Fees for the Classes proposed to be attended, and to sign an engagement to observe order and discipline in the College. They are not entitled to compete for Scholarships or other Collegiate distinctions.

During the term of their attendance on College Lectures they are admitted to read in the Library; and, on payment of a deposit of £1, are permitted to take out two volumes on loan, under the same regulations as Matriculated Students.

Every Non-Matriculated Student must pay to the Bursar one-half of his Class Fees before his name can be entered on the rolls of the several Classes, and the remainder at the commencement of the second Term.

* Candidates are recommended to read M'Dowell's Exercises on Euclid and in Modern Geometry (Cambridge: Deighton, Bell, and Co., 1863), from beginning to page 150.

Appendix, No. 1.

Students of other Universities.

Any Student who shall have pursued part of his Collegiate Studies in any one of the Queen's Colleges, or in any University capable of granting Degrees in the several Faculties of Arts, Law, and Medicine, and any Legal or Medical Student who shall have pursued part of his Legal or Medical Studies under teachers recognised by the Senate of the Queen's University, on passing such Examinations, and fulfilling such other conditions as the Council shall prescribe, may take corresponding rank in this College; and also may compete for Scholarships or other Prizes of the corresponding year, provided he shall not hold at the same time a Scholarship or other office of emolument in any other University, College, or Medical School.

Fees.

The College Fees payable by Matriculated Students are 10*s.* at the commencement of the first year, and 5*s.* at the commencement of each subsequent year.

The Fees payable by Students, whether Matriculated or Non-Matriculated, to the several Professors for attendance on the several Pass Courses of Lectures or instruction, are £1 for each Course extending over one Term only, and £2 for each Course extending over more than one Term of a Session, when attended for the first time, and £1 for each re-attendance on the same.

This rule applies in all cases except the following:—

The Fee payable for the Course of Anatomy and Physiology is £3, when attended for the first time, and £2 for every subsequent attendance; and the Fee payable for Practical Anatomy or Practical Chemistry is £3 for each attendance.

The Fees payable for attendance upon Honor Courses of Lectures and upon Courses of Special Instruction not prescribed as a qualification for a Degree or other University distinction, are £2 for each Course, whether attended for the first time or re-attended.

This rule does not apply to special instruction in Practical Chemistry and in Operative Surgery. In the former case, the Fee is regulated by the time spent in the laboratory, at the rate of £1 a month. The Fee for Operative Surgery is £3.

Matriculated Students who attend voluntary Courses are, so far as these Courses are concerned, regarded as Non-Matriculated.

Table showing in each case the *minimum* amount of Fees payable by Students to the College and for attendance on the several prescribed Courses of Lectures and Instruction.

	First Session.			Second Session.			Third Session.		
	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*
For the Degree of B.A.,	9	10	0	7	5	0	8	5	0
If a Scholar,	5	0	0	3	15	0	4	5	0
For the Degree of M.D.,		—			—			—	
If a Scholar,*		—			—			—	
For the Diploma of Elementary Law,	4	10	0	4	5	0	2	5	0
If a Scholar in Law,	2	10	0	2	5	0	1	5	0
For the Degrees of LL.B. and LL.D.	13	10	0	11	5	0	10	5	0
If a Scholar in Arts,	9	0	0	7	15	0	6	5	0
If a Scholar in Law,	11	10	0	9	5	0	5	5	0
For the Diploma of Civil Engineering,	10	10	0	12	5	0	6	5	0
If a Scholar,	5	10	0	6	5	0	3	5	0

* The Fees for the Degree of M.D. vary according to the course of study pursued.

In all cases the Fees are payable in two instalments. The first instalment includes the College Fee—which is 10*s.* for the first year, and 5*s.* for every subsequent year—and a moiety of the Class Fees payable to the several Professors whose lectures are prescribed in the curriculum. This first instalment is payable at the commencement of the First Term in which the Student enters. The second instalment—consisting of the remaining moiety of the Class Fees—is payable at the commencement of the Second Term. Scholars are exempted from the payment of this latter moiety. *Appendix, No. 1.*

Residences.

It is provided by the Statutes that every Matriculated Student under the age of twenty-one years shall reside, during the College Terms, with his parent or guardian, or with some relation or friend to whose care he shall have been committed by his parent or guardian, or in a Boarding-house, licensed by the President of the College, and arranged for the reception of Students, where he shall be placed under the moral care and spiritual charge of the Dean of Residences of his creed.

Discipline.

All Matriculated Students are required to wear a cap and gown.

A penalty of sixpence shall be imposed on any Student who shall appear within the quadrangle without his cap and gown.

The Porter at the lodge is instructed to report to the Bursar the name of any Matriculated Student who shall appear within the quadrangle without his cap and gown, and also to intimate to the Student at the time that he will be reported.

Any Student so reported shall pay the fine to the Bursar within one week, without receiving further notice, and the fine shall be doubled every week that the fine remains unpaid.

A Professor may inflict a fine not exceeding 2*s.* 6*d.* on any Student for any breach of discipline in his class which he does not consider of sufficient importance to bring under the notice of the Council.

Members of the Library Committee may inflict a fine not exceeding 2*s.* 6*d.* on any Student, for any breach of discipline in the Library, which they do not consider of sufficient importance to bring under the notice of the Council.

Library Regulations.

The Library is open from the commencement of the Session to the 1st of March, between the hours of 10 A.M. and 4 P.M., and from the 1st of March to the 1st of July, between the hours of 10 A.M. and 5 P.M., except (1) on College holidays; (2) for a period of five days in the Christmas and Easter recesses respectively.

The Library is closed during the month of July, except for one hour each week, when the Librarian attends to issue books. From the 1st of August to the commencement of the College Session the Library is open between the hours of 11 A.M. and 3 P.M.

No Student is admitted to the Library without subscribing the following declaration:—

We the undersigned do hereby promise to the President and Council of the Queen's College, Galway, that we will not mark, turn down the leaves of, or write on paper placed upon, or in any way whatsoever soil, deface, injure, or remove, without permission, any book or document in the Library of said College. We also promise that we will not injure the Library furniture; that we will faithfully observe all the rules made for the regulation of the Library, and that we will acquaint the College Authorities with any serious instance of violation of the above rules which may come under our notice.

Appendix, No. 1.

No Student can borrow books from the Library until he has deposited the sum of £1 with the Bursar.

No Student can have more than two volumes on loan from the Library at the same time.

No Student can retain a volume borrowed from the Library more than one week; but the borrower, on returning the book, may renew the loan, if the book has not been in the meantime applied for.

Any Student, on receiving at any time a notice from the Librarian, must return, within twenty-four hours, the books belonging to the Library in his possession.

Any person losing or injuring a book belonging to the Library must replace it by another copy of the same edition and of equal value, or pay such a sum of money as will enable the College to replace it.

FACULTY OF ARTS.

The Degrees of B.A. and M.A.

1.—*The Degree of Bachelor in Arts.*

Candidates for the Degree of B.A. in the Queen's University, must on entering Queen's College, Galway, pass the following Matriculation Examination.

MATHEMATICS.

Arithmetic—Including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.
Algebra—Including Fractions, Proportion, and the Solution of Simple Equations.
Geometry—Euclid, Books I., II.

THE GREEK LANGUAGE.

Either of the following authors which the Candidate may select:—
Homer—Iliad. Books I. and II.
Xenophon—Anabasis, Books I. and II.

THE LATIN LANGUAGE.

Any one of the following authors which the Candidate may select:—
Virgil—Æneid, Books I.-V.
Horace—Odes, Book I.; Satires, Book I.
Sallust—Conspiracy of Catiline, and Jugurthine War.
Cæsar—Gallic War, Books V., VI.
Re-translation from English into Latin of portions of Cæsar.

HISTORY AND THE ENGLISH LANGUAGE.

History, Grecian and Roman, Outlines of.
Geography, Ancient and Modern, Outlines of.*
Grammar, English Grammar, and Composition.

Students are admitted to the University Examination for this Degree, who, after having passed the Matriculation Examination, have attended the College Lectures for at least two full terms in each Session, have passed the prescribed College Examinations, and are recommended for promotion to the Degree by the President of the College.

* Rev. T. K. Arnold's Handbooks are recommended.

The Session extends from the third Tuesday in October to the second Saturday in the following June, with short recesses at Christmas and Easter. Each Session consists of three Terms.

The studies for the Degree of Bachelor in Arts extend over three Sessions, and comprise attendance on the following Curriculum :—

FIRST SESSION.

English (One Term).
Greek.
Latin.
A Modern Continental Language.
Mathematics.

SECOND SESSION.

Logic (One Term).
Natural Philosophy.

Along with any two of the following :—

Greek (Second Course).
Latin (Second Course).
A Modern Continental Language (Second Course)
Mathematics (Second Course).

THIRD SESSION.

English Language and Literature.
Metaphysics, or History, or Political Economy (Two Terms).
Chemistry.
Zoology, or Botany.

Attendance on these Courses includes passing such Examinations as may be appointed by the College Council, and the catechetical parts of the Courses of Lectures.

In each College there is a General Examination in the subjects upon which lectures have been delivered during the Session. There is also a Supplementary Examination in the same subjects, at the commencement of the following Session. All Students must pass either the General Examination or the Supplementary Examination, before they proceed with the course of the succeeding year.

Candidates for the Degree of Bachelor in Arts must reside at their respective Colleges during at least the first two Terms of each Session, but may be exempted from residence during the third Term by a special grace of the College Council.

Third year's Students may substitute attendance on one or on two Courses of Honor Lectures, for attendance upon a like number of the Courses above set down for study in the Third Session.

Candidates for the Degree of Bachelor in Arts are required to pass two University Examinations—the Previous Examination held simultaneously in each of the Colleges of the University, and the Degree Examination held in the Hall of the University in Dublin.

Students who have completed their second Session must pass the Previous Examination before rising to the third year, unless prevented by illness or other inevitable accident, in which case the Senate may admit them to a Supplementary Examination.

For the regulations as to the First University Examination in Arts, and the Examination for the Degrees of B.A. and M.A., see the "University Regulations."

For the Exhibitions awarded at the First University Examination in Arts, see p. 38.

Appendix, No. 1.

DAYS AND HOURS OF LECTURES.

	Subjects.	Terms.	Mon.	Tues.	Wed.	Thurs.	Friday.	Sat.
1st Year	French,	1, 2, 3,	10	.	10	10	.	.
	German,	1, 2, 3,	.	2	.	2	.	.
	Latin (pass),	1, 2, 3,	12	.	12	.	12	.
	Greek (pass),	1, 2, 3,	.	11	.	12	.	12
	Mathematics (pass),	1, 2, 3,	1	.	1	.	1	.
	English,	2	11	.	11	.	11	.
	Latin (honor),	1, 2, 3,	.	11	.	11	.	11
	Greek (honor),	1, 2, 3,	12	.	12	.	12	.
	Mathematics (honor),	1, 2, 3,	.	1	.	1	.	.
2nd Year	French,	1, 2, 3,	3	.	3	.	.	.
	German,	1, 2, 3,	2	.	.	.	3	.
	Greek,	1, 2, 3,	.	10	.	11	.	.
	Latin,	1, 2, 3,	11	.	11	.	11	.
	Mathematics (pass),	1, 2, 3,	.	1	.	1	.	.
	Natural Philosophy (pass),	1, 2, 3,	12	.	12	.	.	.
	Logic,	2,	1	.	1	.	1	.
	Mathematics (honor),	1, 2, 3,	12	.	12	.	12	.
	Natural Philosophy (honor),	1, 2, 3,	.	2	.	2	.	.
3rd Year	Zoology or Botany,	1, 2, 3,	.	11	.	11	11	11
	Chemistry,	1, 2, 3,	12	.	12	.	12	12
	English Language and Literature,	1, 2,	3	.	3	.	3	.
	Metaphysics,	1, 2,	.	1	.	1	.	1
	History,	1, 2,	2	.	2	.	2	.

JUNIOR SCHOLARSHIPS IN ARTS.

Of the Thirty Junior Scholarships appropriated to Students in the Faculty of Arts :—

Ten are tenable by Students of the First Year.
Ten „ „ Second Year.
Ten „ „ Third Year.

Of the ten Junior Scholarships in Arts tenable by Students of each year, five are awarded for proficiency in literary studies, and five for proficiency in scientific studies ; but it is competent for the Council, in case Scholarships in either department are withheld on the ground of insufficient answering, to assign the unawarded Scholarships to the other department.

The Examination for Junior Scholarships in Arts of the first year takes place immediately after the first Matriculation Examination of the Session, and is open to all Students of the first year, who have passed that Examination, and have paid the regulated fees. Those candidates to whom Scholarships are then awarded hold their Scholarships for one year.

There is a further Examination, at the commencement of the second year, which is open to all Matriculated Students in Arts of that year who have passed the Examination and attended the lectures prescribed to Students of the first year, and who have paid the regulated fees.

Those Candidates to whom Scholarships are awarded at this further Examination, hold their Scholarships for two years, provided (1) they answer sufficiently in two Honor Courses at the Sessional Examination of the second year ; (2) they pass the First Examination for the Degree of B.A.

If any Student be placed, at the Examinations for Junior Scholarships in Arts, first on both the lists of candidates, he is entitled to a Scholarship of each division ; but in no other case can two Scholarships be held by the same Student.

SCHOLARSHIP EXAMINATIONS.—SESSION 1868-69.

Literary Scholarships, First Year.

THE GREEK LANGUAGE.

Homer—Iliad, Books VI. and XVIII.
Euripides—Phœnissæ.
Xenophon—The Anabasis, Book VI. and VII.

THE LATIN LANGUAGE.

Virgil—The Æneid, Books I.–VI.
Horace—The Odes, Books I., II.; the Satires; the Epistles.
Cicero—Pro Lege Manilia.
Sallust—Conspiracy of Catiline, and Jugurthine War.
Livy—Books I.–III.

COMPOSITION.

In Greek, Latin, and English Prose.*

HISTORY AND GEOGRAPHY.

Grecian History, to the Death of Alexander.†
Roman History, to the Accession of Augustus.‡
Outlines of Ancient and Modern Geography.§

Science Scholarships, First Year.

MATHEMATICS.

Arithmetic :—

Including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.

Algebra :—

Including the Solution of Simple and Quadratic Equations; Arithmetical and Geometrical Progressions; Permutations and Combinations; the Binomial Theorem; the nature of Logarithms.

Geometry :—

Euclid, Books I., II., III., IV., and VI., with definitions of Book V.

Plane Trigonometry :—

So far as to include the Solution of Triangles.

The use of Logarithmic and Trigonometrical Tables.

Literary Scholarships, Second Year.

THE GREEK LANGUAGE.

Homer—Iliad, Books VII.–XII.
Demosthenes—The Olynthiac Orations.
Xenophon—Hellenica, III. and IV.
Euripides—Bacchæ.

THE LATIN LANGUAGE.

Cicero—Tusculan Disputations, Book I.
Cicero—Letters to his brother, Quintus.
Tacitus—Annals, Books I.–III.
Terence—Adelphi.
Horace—Carmen Seculare and Epodes.
Juvenal—Satires I., III., VIII., X., XIII., and XIV.

THE ENGLISH LANGUAGE.

Macaulay's Essay on Clive.
Bain's English Grammar.
Shakespeare—Macbeth.

* Rev. T. K. Arnold's Introductory Works on Greek and Latin Prose Composition are recommended.

† Dr. William Smith's History of Greece is recommended.

‡ Liddell's Roman History is recommended.

§ Dr. William Smith's Handbook of Ancient Geography is recommended.

Appendix, No. 1.

MODERN LANGUAGES.

French :—

Racine—Athalie, Andromaque, Acts I. and II.
Mignet—Révolution Française, Chap. VI. to end of the work.
An Extract from any other French Author.
French Grammar.
Outlines of French Literature.

Or,

German :—

Schiller—Wilhelm Tell, Acts I. and II., and Minor Poems.
German Grammar.
Outlines of German Literature.

HISTORY AND GEOGRAPHY.

As in the First Year.

COMPOSITION.

In Greek, Latin, English, and French or German Prose.

Science Scholarships, Second Year.

MATHEMATICS.

The Course appointed for Science Scholarships of the first year.

Algebra :—

Nature and Simple Transformations of Equations; the Solution of Cubic and Biquadratic Equations; Method of Indeterminate Coefficients.

Geometry :—

Elements of Solid Geometry.

Trigonometry :—

Plane and Spherical.

Analytic Geometry :—

Discussion of the Equations of the Right Line and Circle.

The Professor's Lectures to the Class of the First Year.

Senior Scholarships.

The College is empowered to award Seven Scholarships, of the value of forty pounds each, by examination, to the most distinguished Students who shall have proceeded to the Degree of B.A., for proficiency in special departments of study. Of these Scholarships one is awarded for proficiency in each of the following departments :—

1. The Greek and Latin Languages, and Ancient History.
2. The Modern Languages, and Modern History.
3. Mathematics.
4. Natural Philosophy.
5. Metaphysical and Economic Science.
6. Chemistry.
7. Natural History.

I.—GREEK AND LATIN LANGUAGES, AND ANCIENT HISTORY.

The Greek Language :—

Thucydides—Book VI.
Plato—Phædo.
Demosthenes—Meidias.
Pindar—Pythian Odes.
Aristophanes—The Clouds.
Odyssey—Books VI. to XI. inclusive.
Iliad—Books XVIII.–XXIV.
Translations from unprepared Greek.

The Latin Language :—

Cicero—Tusculan Disputations, Books I., II., and V.
Tacitus—Histories.
Plautus—Trinummus.
Juvenal and Persius.
Translations from unprepared Latin.
Composition in Greek and Latin Prose.

Ancient History :—

Grote's History of Greece, Chaps. LV.–LXVIII.
Mommsen's Roman History, Vol. I.
Mure's History of the Language and Literature of Greece.
Müller's History of Grecian Literature, continued by Donaldson, to the end of chap. xlii.

II.—MODERN LANGUAGES AND MODERN HISTORY.

The English Language :—

Marsh's Students' Manual of the English Language.
Chaucer—Prologue of the Canterbury Tales.
Spenser—Fairy Queen, Book I.
Shakespeare—Julius Cæsar and King John.
Pope—Essay on Man.

The French Language:—

La Bruyère—Les Caractères.
Molière—Le Misanthrope.
Corneille—Le Cid.
Extracts from writers of the present century.
History of French Literature.
French Composition.

The German Language :—

Schiller—Die Braut von Messina.
Lessing—Hamburgische Dramaturgie, from the beginning to 12th Stück; Laokoon.
Extracts from writers of the present century.
History of German Literature.
German Composition.

Modern History :—

Hallam's Middle Ages, Chap. I. (last edition, with the notes).
Lingard—History of England, from the Norman Conquest to the close of the reign of Henry VII.

III.—MATHEMATICS.

The Mathematical Course appointed for the Science Scholarship of the second year; theory of Algebraical Equations, including their numerical solution; Analytic Geometry of two and of three dimensions; Differential and Integral Calculus, including its application to Geometry.

IV.—NATURAL PHILOSOPHY.

Todhunter's Statics.
Tait and Steele's Dynamics, and Routh's Dynamics of a Rigid body.
Walton's Hydrostatical Problems.
Parkinson's Optics.
Hymer's Astronomy.
Jamin's Traité de Physique.
Lloyd's Lectures on the Wave Theory of Light.
The Professor's Lectures to the Honor Class of the Third Year.

V.—METAPHYSICAL AND ECONOMIC SCIENCE.

Metaphysics :—

Descartes—Discours de la Méthode.
Locke and Kant—Philosophical Systems of.
Sir William Hamilton—Lectures on Metaphysics, Vol. II.
Mill—Examination of Sir William Hamilton's Philosophy.

Jurisprudence :—

Jurisprudence as treated in the Professor's Lectures.
Austin's Province of Jurisprudence, Lectures I., II., V., and VI., and Appendix.
Dumont's Bentham—Principes de Législation—Code Civil et Pénal.
Stephen's (James Fitzjames) Criminal Law of England, omitting chap. VII., so far as p. 265, and from p. 338 to end.
Sandars' Institutes of Justinian, Introduction, and Books I. and II.
Maine's Ancient Law.

Political Economy :—

Political Economy, as treated in the Professor's Lectures.
Mill's Principles of Political Economy.
Smith's Wealth of Nations (omitting from the digression concerning the value of Silver, Book I., chap. xi., part 3, to the end of Book I., Book III., and chaps. iv.–ix. of Book IV.)

Appendix, No. 1.

Political Economy—*continued.*

Ricardo's Political Economy, chapters VII. to XVI.
Senior's Political Economy.
Cairnes' Logical Method of Political Economy.
Göschen's Foreign Exchanges.

VI.—CHEMISTRY.

Theoretical Chemistry :—

Miller's Element of Chemistry (third edition).
Wurtz' Introduction to Chemical Philosophy.
Hoffman's Modern Chemistry.
Watt's Dictionary of Chemistry.
Fowne's Chemistry (tenth edition).

Practical Chemistry:—

Analysis, and an acquaintance with Manipulation to the extent to which it is carried out in the *Practical Course* prescribed for Medical Students will be considered the minimum. (Bowman's Introduction to Practical Chemistry is recommended.)

VII.—NATURAL HISTORY.

Henfrey's Botany.
Carpenter's Comparative Physiology.
Dallas's Animal Kingdom; Green's Manuals.
Whewell's Philosophy of the Inductive Sciences, Vol. I., Book VII., chap. i., Book VIII., chaps. i., ii., iv., Book IX., chap. vi.
Whewell's History of the Inductive Sciences, Vol. III., Books XVI., XVII.
Practical Examinations in Botany and Zoology.

PRACTICAL COURSE FOR COMMERCIAL AND GENERAL PURSUITS.

In order to extend the advantages of higher education to youths intended for commercial and general pursuits, the Senate has resolved to institute special courses of instruction, and to grant Diplomas, conferring the title of Licentiate in Arts, under the following conditions :—

1. To have matriculated in one of the Colleges of the Queen's University.
2. To have pursued, in one of the Colleges of the Queen's University, the course herein prescribed.

To have passed the University Examination herein prescribed.

The studies for the Diploma of Licentiate in Arts extend over two Sessions, and comprise attendance on the following Curriculum :—

First Session.

Two Languages, of which one may be English.
Mathematics.
Another Course on any subject in the annexed list.

Second Session.

Greek, Latin, or a Modern Continental Language.
Logic (one Term).
Natural Philosophy.
And two other Courses on subjects in the annexed list.

If any of the courses, except that on Logic, extend over one term only, some other course from the annexed list must be attended as a supplement to it, but not necessarily in the same Session.

Credit will not be given for attending the same course of Lectures a second time.

Attendance on the courses is, in all cases, understood to include passing such Examinations as the College Council shall appoint, and the catechetical parts of the courses of Lectures.

Candidates for the Diploma of Licentiate in Arts must reside at their respective Colleges during at least the first two terms of each Session.

After having completed the above curriculum, each Candidate for the Diploma is required to pass a University Examination in either Greek, Latin, or a Modern Continental Language; in Mathematical Science;

and in two other subjects which he is allowed to select from the annexed list, viz.:— *Appendix, No. 1.*

The Mathematical Sciences.	The Modern Continental Languages.
The Experimental Sciences.	Greek.
The Natural Sciences.	Latin.
Goemetrical Drawing.	Logic.
Mensuration, Levelling, and Mapping.	Metaphysics.
Anatomy and Physiology.	History.
English Language and Literature.	Political Economy.

English Composition forms a part of all University Examinations.

Licentiates in Arts who may desire to proceed to the Degree of Bachelor in Arts, may enter directly on the second Session in the course for this Degree, provided they attend in it, instead of the usual curriculum, all the courses prescribed for the first two years which they shall not have already attended in the curriculum for the Diploma of Licentiate.

In compliance with the first of the above specified conditions, the Council of the Queen's College, Galway, has instituted the following course for the Matriculation Examination :—

MATHEMATICS.

Arithmetic—Including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.
Algebra—Including Fractions, Proportion, and the Solution of Simple Equations.
Geometry—Euclid, Books I., II.

GEOGRAPHY AND THE ENGLISH LANGUAGE.

Geography—Ancient and Modern, Outlines of.
Grammar—English Grammar and Composition.

FACULTY OF LAW.

Diploma of Elementary Law.

Candidates for the Diploma of Elementary Law are required to pass a Matriculation Examination in the following subjects :—

GREEK.

Xenophon—Anabasis, Book I.
Grammar.

LATIN.

One of the following authors :—

Cæsar—Gallic War, Book V.
Virgil—Æneid, Book I.

Retranslation from English into Latin of portions of Cæsar.

HISTORY AND THE ENGLISH LANGUAGE.

History—Outlines of Grecian and Roman History.
Geography—Outlines of Ancient and Modern Geography.
English—English Grammar and Composition.

MATHEMATICS.

Arithmetic—including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.
Algebra—including Fractions, Proportion, and the Solution of Simple Equations.
Geometry—Euclid, Books I., II.

Students who have passed the Matriculation Examination, and have pursued, during three years, the following courses of study, are admitted to Examination for the Diploma of Elementary Law :—

FIRST YEAR.

The Law of Property, and the Principles of Conveyancing.
Jurisprudence.

SECOND YEAR.

Equity and Bankruptcy.
Civil Law.

THIRD YEAR.

Common and Criminal Law.

Appendix, No. 1.

JUNIOR SCHOLARSHIPS IN LAW.

Of the three Junior Scholarships appropriated to the Faculty of Law, one is awarded to a Student of the First Year, one to a Student of the Second Year, and one to a Student of the Third Year.

SUBJECTS OF EXAMINATION.—FIRST YEAR.

LAW OF PROPERTY, &c.

Williams' Real Property.

JURISPRUDENCE AND CIVIL LAW.

Austin's Province of Jurisprudence. Lectures I., II., and V.
Selections from the "Traité de Législation" of Dumont's Bentham, viz., "Principes de Législation."
Sandars' Institutes of Justinian, Introduction.

SECOND YEAR.

All the business of the preceding Session.

EQUITY.

Smith's Manual of Equity Jurisprudence.

LAW OF PROPERTY, &c.

Williams' Personal Property; Smith's Lectures on the Law of Contracts.

JURISPRUDENCE AND CIVIL LAW.

The same as the course for the first year, together with

Jurisprudence as treated in the Professor's Lectures.
Austin's Province of Jurisprudence, Lecture VI. and Introduction.
Dumont's Bentham—"Principes du Code Civil et Pénal."
Sandars' Justinian, Books I. and II.
Stephen's Criminal Law of England, chaps. I., III., IV., V.
Maine's Ancient Law.

THIRD YEAR.

All the business of the two preceding Sessions.

LAW.

Broom's Commentaries on the Common Law, Books II., III., and IV.
White and Tudor's Leading Cases in Equity, vol. I.

JURISPRUDENCE AND CIVIL LAW.

The same as the course for the second year, together with

Jurisprudence as treated in the Professor's Lectures.
The remainder of Stephen's Criminal Law of England (omitting chap. VII., so far as p. 265, and from p. 338 to the end).
Hallam's Middle Ages, chap. VIII.

THE DEGREES OF LL.B. AND LL.D.

Candidates for the Degree of LL.B. are admitted to Examination for that Degree from the Queen's University in Ireland, one year after they have obtained the Degree of B.A., and completed the above curriculum for the Diploma in Elementary Law.

Candidates for the Degree of LL.D. are admitted to Examination for that Degree from the Queen's University in Ireland, at the expiration of two years after they have obtained the Degree of LL.B.

SENIOR SCHOLARSHIP.

The College is empowered to award one Scholarship of the value of forty pounds, by Examination, to the most distinguished Student who shall have

proceeded to the Degree of B.A., and who shall have completed the Course of legal study prescribed to candidates for the Degree of LL.B. The following is the course prescribed for Examination :— *Appendix, No. 1.*

JURISPRUDENCE AND CIVIL LAW.

The same as the course in these subjects for the Senior Scholarship in Arts (see p. 21).

PRINCIPLES OF CONSTITUTIONAL AND INTERNATIONAL LAW.

Hallam's Constitutional History of England; Kent's "Lectures on International Law" (prefixed to his "Commentaries"); Letters of "Historicus."

MEDICAL JURISPRUDENCE.

Works recommended—Smith's Analysis of Medical Evidence; Beck's Medical Jurisprudence; Taylor's Medical Jurisprudence; Orfila, Médecine Légale; Christison on Poisons; Abercrombie on the Intellectual Powers; Guy's Medical Jurisprudence; Sedillot, Manuel complet de Médecine Légale.

ENGLISH LAW.

All the business of the preceding Sessions.

LAW OF PROPERTY, &c.

All the business of the preceding Sessions :—

Jarman on Wills; Sugden on Powers; Taylor on Evidence.

PRIVILEGES OF LAW STUDENTS.

By the recent regulations of the Benchers of the King's Inns, candidates for the Bar who attend the Law Lectures in the Queen's Colleges, possess the same privileges as Students who attend the Lectures in Trinity College, Dublin.

Students intending to proceed for the Certificate of the Law Professors, so as to entitle them to serve an apprenticeship of *four* years instead of *five*, under the provisions of *an Act for amending the several Acts for the Regulations of Attorneys and Solicitors* (14 and 15 Vict., cap. 88), are required to enter their names with the Registrar, *either as Matriculated or Non-Matriculated* Students, and pay the necessary College and Class Fees to the Bursar before the commencement of the Law Lectures in each Session.

Such Students are required to attend all the Lectures and pass all the Examinations prescribed for the first and second years of the course of study for candidates for the Diploma of Elementary Law.

FACULTY OF MEDICINE.

Degrees of M.D. and M.Ch.

Each Candidate for the Degree of Doctor in Medicine, or Master in Surgery, is required—

1. To have passed in one of the Colleges of the Queen's University the Entrance Examination in Arts, and to have been admitted a Matriculated Student of the University.
2. To have attended in one of the Queen's Colleges, lectures on one Modern Continental Language for six months, and Lectures on Natural Philosophy for six months.
3. To have also attended, in some one of the Queen's Colleges, at least two of the courses of Lectures marked with an asterisk in the following list. For the remainder of the courses, authenticated certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools, recognised by the Senate of the Queen's University in Ireland.
4. To pass two University Examinations—the first University Examination and the Degree Examination.

The curriculum shall extend over at least four years, and shall be divided into periods of at least two years each.

Candidates are recommended to pass the Matriculation Examination, prior to entering on the second period.

Appendix, No. 1.

It is recommended that the first period shall comprise attendance on the following courses of medical lectures :—

*Chemistry.
*Botany with Herborizations for practical study, and Zoology.
*Anatomy and Physiology.
*Practical Anatomy.
*Materia Medica and Pharmacy.

And that the second period shall comprise attendance on the following courses of medical lectures :—

Anatomy and Physiology (*second course*).
Practical Anatomy (*second course*).
*Theory and Practice of Surgery.
*Midwifery.
*Theory and Practice of Medicine.
*Medical Jurisprudence.

In addition to the above courses of lectures, candidates shall have attended, during either the first or second period—

A Modern Continental Language (in one of the Colleges of the University).
Experimental Physics (in one of the Colleges of the University).

Also, during the first period—

Practical Chemistry (in a recognised Laboratory).
Medico-Chirurgical Hospital (recognised by the Senate), containing at least sixty beds; together with the clinical lectures therein delivered, at least two each week—a winter session of six months.

And during the second period—

Practical Midwifery, at a recognised Midwifery Hospital, with the clinical lectures therein delivered, for a period of three months; or a Midwifery Dispensary for the same period; or ten cases of Labour under the superintendence of the Medical Officer of any hospital or dispensary where cases of labour are treated.
Medico-Chirurgical Hospital (recognised by the Senate), containing at least sixty beds; together with the clinical lectures therein delivered—eighteen months; including either three winter sessions of six months each, or two winter sessions of six months each, and two summer sessions of three months each.

Medical Examinations are held in June, and in September and October.

The June Examinations are Pass Examinations, and commence on the Tuesday following the second Saturday in June.

The Honor Examinations commence on the last Tuesday in September, and are followed by Pass Examinations.

Each candidate for examination in June must forward to the Secretary, on or before the first of June, notice of his intention to offer himself as a candidate, along with his certificates; and each candidate for examination in September or October must forward similar notice, along with his certificates, on or before the first of September.

The First University Examination in Medicine.

The First University Examination may be passed either in June or September.

It is competent for Students to present themselves for the First University Examination at the termination of the first period of the curriculum, or at any subsequent period.

Before being admitted to examination, each candidate must produce satisfactory evidence of having completed the course recommended for study during the first period of the curriculum.

The First University Examination comprises the subjects recommended for study during the first period of the curriculum, along with which any Candidate may present himself for examination in Experimental Physics and Modern Languages, if he have already attended in one of the Queen's Colleges the prescribed courses on these subjects.

The course of Experimental Physics to be prepared is—

In Mechanics—Experimental proof of the parallelogram of forces; composition and resolution of parallel forces; conditions of equilibrium in the lever, wheel and axle, pulley, inclined plane, and screw; laws of motion—motion of falling bodies.

In Hydrostatics—Equilibrium of fluids; pressure of fluids on plane surfaces; methods of determining the specific gravity of solids, liquids, or gases; method of measuring the pressure of the atmosphere; Mariotte's law; construction and principle of syphon, barometer, manometer, air pump.

In Acoustics—Cause of sound; its propagation and velocity in solids, liquids, or gases; reflexion and refraction of sound; numerical evaluation of musical sounds; construction of syren; use of monochord.

In Heat—Construction and use of thermometers and pyrometers; laws of the expansion of solids, liquids, and gases; fusion and solidification; specific heat; latent heat; action of freezing mixtures.

In Light—Experimental proofs of laws of reflexion and refraction; formation of images by plane and spherical mirrors and by lenses; analysis of solar light; dispersion produced by a prism or lens; achromatic prism; achromatic lens; simple and compound microscope; polarization of light by reflexion; by transmission; colours of polarized light.

In Magnetism—Natural and artificial magnets; neutral line and poles; mutual action of magnets; hypothesis of two magnetic fluids; magnetic induction; terrestrial magnetism; directive action of the earth; magnetic meridian; magnetic declination; inclination; intensity; methods of measuring their amount and variations.

In Electricity—Development by friction; conductors and non-conductors; mutual action of bodies charged with electricity; measurement of electrical attractions and repulsions; theories of electricity; electrical induction; electroscopes and electrical machines; Leyden jar; properties of electricity—mechanical, thermal, chemical, magnetic, physiological.

Voltaic pile and its modifications; single and two fluid batteries; direction of current in battery; chemical, thermal, and luminous effects of battery; induction of currents by currents; mutual action of currents and magnets; galvanometers; application of electricity to telegraphy; induction coil.

The portions of Zoology to be prepared are—

a. The general characters of the classes of the Animal Kingdom.
b. The first principles of Animal Physiology
c. The comparative Anatomy and Classification of either the *Vertebrate* or the *Invertebrate* Animals—whichever is selected by the candidate.
d. A special practical knowledge of the leading characters and classification of either some one Vertebrate class, or some one Invertebrate sub-kingdom.

Milne-Edwards' "Zoologie" is recommended as a text-book, or Dr. Knox's translation of it, published by Renshaw, London.

English Composition forms a part of all University Examinations.

Competitors for Honors will be examined in all the subjects of the First University Examination, including Experimental Physics and Modern Languages.

Two Exhibitions, one consisting of two instalments of £20 each, the other of two instalments of £15 each, will be awarded to the best answerers at the Honor Examinations, if they be recommended by the Examiners as possessed of sufficient absolute merit. Further regulations regarding these Exhibitions will be found in p. 39.

The candidates who pass with Honors will be arranged in three classes.

Candidates who postpone passing their First Medical Examination until they present themselves at the Degree Examination are not eligible for Honors with the First Examination.

Both Honor and Pass Examinations will be held in September. The Examination held in June is a Pass Examination.

Degree Examinations in Medicine.

Examinations for the Degrees of M.D. and M.Ch. will be held in June and September.

The Fee for each Degree is Five Pounds.

Appendix, No. 1.

Each Candidate must be recommended by the President of his College, and produce certificates to the following effect:—

1. A certificate from the Secretary of the Queen's University, that he has passed the Previous Examination, unless the candidate present himself for both Examinations simultaneously.

2. From the Council of his College, that he has passed a full Examination in the subjects of study prescribed in the entrance Course of the Faculty of Arts, and has been admitted a Matriculated Student in the Faculty of Medicine.

3. That he has attended in the Colleges of the Queen's University two of the courses marked with an asterisk on p. 26, lectures on one Modern Language, and lectures on Experimental Physics.

4. Certificates that he has completed all other prescribed courses.

The Examination for the Degree of M.D. comprises the subjects recommended for study during the second period of medical education, along with Experimental Physics and one Modern Language, unless an Examination in these subjects shall have been already passed at the First University Examination.

The Examination for the Degree of M.Ch. comprises in addition an Examination in Operative Surgery.*

Candidates who graduate with Honors will be arranged in three classes. Candidates who take a First Class will receive a Medal and Prize. Candidates who take a Second Class will receive a Prize. Candidates who take a Third Class will receive a Certificate of Honor.

The Examination for the Degree with Honors will commence on the last Tuesday in September, and will be followed by the Examination of those candidates who seek to graduate without Honors.

The Examination held in June is a Pass Examination.

Matriculation.

Candidates for the Degree of M.D. in the Queen's University are required to pass a Matriculation Examination in the following subjects:—

GREEK.

Xenophon—The Anabasis, Book I.
Grammar.

LATIN.

One of the following authors:—

Virgil—Æneid, Book I.
Cæsar—Gallic War, Book V.
Retranslation from English into Latin of portions of Cæsar.

ENGLISH.

Grammar and Composition.

MATHEMATICS.

Arithmetic and Algebra:—

The First four Rules of Arithmetic; Vulgar and Decimal Fractions; the Rule of Three; Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Simple Equations.

Geometry:—

Euclid, Book I.

HISTORY AND GEOGRAPHY.

History:—

Outlines of Grecian and Roman History.

Geography:—

Outlines of Ancient and Modern Geography.†

* Candidates for the Degree of Master in Surgery, who obtained the Degree of M.D. in this University before the 1st of January, 1865, will be exempted from the Examination in Operative Surgery.

† Rev. T. K. Arnold's Handbooks are recommended.

DAYS AND HOURS OF LECTURES.

	Subjects.	Months.	Mon.	Tues.	Wed.	Thurs.	Friday.	Sat.
1st Period.	French,	VI.	10	.	10	10	.	.
	German,	VI.	.	2	.	2	.	.
	Botany and Zoology,	VI.	.	11	.	11	10	11
	Experimental Physics,	VI.	.	12	.	12	.	.
	Chemistry,	VI.	12	.	12	.	12	12
	Logic,		1	.	1	.	1	.
	Anatomy and Physiology,		3	3	3	3	3	.
	Practical Anatomy,		1	1	1	1	1	.
	Practical Chemistry,		2	.	2	.	2	.
	Materia Medica,		4	.	4	.	4	.
2nd Period.	Practical Anatomy,		1	1	1	1	1	.
	Anatomy and Physiology,		3	3	3	3	3	.
	Surgery,		11	.	11	.	11	.
	Midwifery,		2	.	2	.	2	1
	Medicine,		.	2	.	2	.	2
	Medical Jurisprudence,		.	4	.	4	.	4

The lectures of the Professors are fully recognised by the Queen's University, the Universities of Dublin, London, Edinburgh, Oxford, Glasgow, Durham; the University and King's College, Aberdeen; the College of Physicians, London; the Royal College of Surgeons in Ireland, England, and Scotland; the Faculty of Physicians and Surgeons, Glasgow; the Apothecaries' Halls of Dublin and London; the Army, Navy, and East India Medical Boards.

The hospitals in connexion with the College are in its immediate vicinity. They contain on an average two hundred patients, and are visited every morning by Professors of the College, who deliver clinical lectures. Attendance upon these hospitals and clinical lectures fully qualifies for the Royal Colleges of Surgeons of England, Ireland, and Scotland, as well as for the Queen's University.

The Anatomical Buildings within the College grounds contain a theatre for Demonstrations and a Dissecting Room, which affords every facility for study.

The Pathological Department of the Medical Museum has received a large and valuable accession of preparations and drawings, the collection of a late eminent teacher. It contains Wax Models representing Skin Affections, and Surgical Diseases both before and after operation. The Anatomical Department contains a variety of Osteological, Vascular, and other preparations, besides Casts and Models. Instruction in Microscopic Anatomy is given in the Physiological Class-room.

The Museum of MATERIA MEDICA contains a perfect collection of the medicines in the British Pharmacopœia, both pure and spurious, and of several foreign ones; of the ores and minerals that furnish medicines, prepared medical plants, and complete series of coloured botanical plates; various apparatus for the application of medical electricity and other operations in connexion with the Materia Medica and Pharmaceutical processes.

In the department of MEDICAL JURISPRUDENCE there are, in addition, the various poisons in their several forms and combinations, a complete collection of tests and apparatus for exhibiting toxicological and other analyses, and microscopical investigations, &c.

The College has added to its means of teaching the collection of the late DOCTOR MONTGOMERY, formerly Professor of Midwifery in the King

Appendix, No. 1.

and Queen's College of Physicians in Ireland. It consists of above 600 specimens illustrative of:—

1st. The Anatomy and Physiology of the reproductive system, comparative and human.

2nd. Parturition and deviations from the natural process.

3rd. The diseases of pregnancy and of the puerperal state.

4th. Organic derangements unconnected with these conditions; and

5th. The Pathology of intra-uterine existence.

The Library of the College contains at present many thousand volumes, and additions are being constantly made. The Medical division comprises almost every work of note in each branch of Medical Science, together with a large collection of costly plates. There is also a Lending Library, from which Students are permitted to borrow books.

SCHOLARSHIPS.

Eight Junior Scholarships are appropriated to the Faculty of Medicine of the value of £25 each. Of these—

Two	are allotted to	Students of the	First Year.
Two	,,	,,	Second Year.
Two	,,	,,	Third Year.
Two	,,	,,	Fourth Year.

Regulations respecting Medical Scholarships and Exhibitions.

(Scholars are required to pay only one-half of the ordinary class fee for each obligatory course of lectures.)

All Scholars and Exhibitioners are required to pass the Sessional Examination.

First Year's Scholarships.

All Students who have passed the Matriculation Examination may compete for the Scholarships of the first year.

For the one Scholarship the Examination will embrace the course prescribed for the Literary Scholarships of the first year, in the Faculty of Arts.

For the other Scholarship the course prescribed for Science Scholarships of the first year in the Faculty of Arts.

If at either of these Examinations a competent candidate do not present himself, the Scholarship assigned to that department may be awarded to the other department, if there be in the latter a second candidate duly qualified.

A Student to whom a Scholarship of the first year has been awarded, shall attend the following courses:—

A Modern Language.
Natural Philosophy.
Anatomy.
Chemistry.
Botany and Zoology.

Second Year's Scholarships.

To be allowed to compete for a Scholarship of the second year, a Student must be of not more than one year's standing in some school recognised by the Senate of the Queen's University.

A Candidate may select for the subjects of his Examination any three or more of the following subjects, of which Practical Anatomy, or Anatomy and Physiology, must be one. The value of each subject shall be estimated

according to the number placed opposite to it in the following list, and no mark under 100 shall be taken into account in any subject :— *Appendix, No. 1.*

Anatomy and Physiology, or Practical Anatomy,	1,000
Chemistry,	500
Botany and Zoology,	500
A Modern Language,	500
Natural Philosophy,	500
Materia Medica,	500

SUBJECTS OF EXAMINATION.

FRENCH.*

Mignet—Révolution Française, from Chap. VI. to the end of the work.
Racine—Athalie.
Outlines of French Literature.
Translation from English into French.

GERMAN.*

Schiller—Wilhelm Tell, Acts I. and II.; the Minor Poems.
Outlines of German Literature.
Translation from English into German.

Natural Philosophy.—Elements of Mechanics, Hydrostatics, Pneumatics, Optics, Heat, and Electricity.

Zoology.—Vertebrata.

Botany.—Structural and Physiological Botany; Principles of Classification; Characters of the Natural Orders yielding medicinal plants.

Anatomy and Physiology.—General Histology and the Organs and Functions of Digestion and Urination.

Practical Anatomy.—Osteology and Arthrology.

Chemistry.—General Principles of Chemical Philosophy; Laws of Combination by weight and volume; Atomic Theory; Nature of Salts, &c.; Chemistry of non-metallic bodies; Chemistry of Metals; Organic Chemistry.

A Student to whom a Scholarship of the second year has been awarded shall attend such of the medical courses assigned to the first period of the curriculum prescribed in the University regulations as he has not already taken. He shall also take a course of Modern Languages and of Natural Philosophy, if he have not previously done so in a Queen's College.

Third Year's Scholarships.

To be allowed to compete for a Scholarship of the third year, a Student must have attended, in some medical school recognised by the Senate of the Queen's University, four of the following courses :—

Anatomy and Physiology.
Chemistry.
Botany.
Zoology.
Practical Chemistry.
Practical Anatomy.
Materia Medica.

And must not be of more than two years' standing.

The Examination shall include the following subjects. The value of each shall be estimated by the number placed opposite it in the following list; and no mark under 300 shall be taken into account in either of the first named, nor under 200 in the last named :—

Practical Anatomy,	1,000
Materia Medica,	1,000
Practical Chemistry,	500

* The candidate may select either French or German.

Appendix, No. 1.

SUBJECTS OF EXAMINATION.

PRACTICAL ANATOMY.—Joints, Muscles, Vessels, Viscera, and Brain.

During the Examination, Candidates may be called on to make dissections, or to describe structures placed before them.

MATERIA MEDICA.—Tonics, Alkaloids, Cathartics, Diuretics, Narcotics. Symptoms indicating their unhealthy action, and treatment to counteract such action.

PRACTICAL CHEMISTRY.—As taught in the class.

A Student to whom a third year's Scholarship has been awarded, shall attend, during the year of his election, four at least of the courses prescribed for the second period in the University regulations.

FOURTH YEAR'S SCHOLARSHIPS.

To be allowed to compete for a Scholarship of the fourth year, the candidate must have attended, in some school recognised by the Senate of the Queen's University, all the strictly professional courses of the first period, and must have attended three at least of those of the second period prescribed in the regulations of the Queen's University, and must not be of more than three years' standing.

A candidate for fourth year's Scholarship may choose any four of the following subjects, provided he has attended lectures upon them, as those in which he shall be examined. The value of each subject shall be estimated by the number assigned to it in the following list, and no mark under 300 shall be taken into account:—

Anatomy and Physiology,	1,000
Practical Anatomy,	1,000
Theory and Practice of Surgery,	1,000
Midwifery and Diseases of Women and Children,	1,000
Theory and Practice of Medicine,	1,000
Medical Jurisprudence,	1,000
Materia Medica,	1,000

SUBJECTS OF EXAMINATION.

ANATOMY AND PHYSIOLOGY.—The Histology, Physiology, and Development of the Circulatory, Nervous, and Reproductive Systems and Organs of Special Sense. Candidates may be required to name objects under the Microscope.

PRACTICAL ANATOMY.—Topographic and Surgical Anatomy. Candidates will be required to make dissections, or describe structures placed before them.

THERAPEUTICS AND PATHOLOGY.—1. Candidates must be prepared to answer in any part of the previous course of lectures in Materia Medica; Poisonous actions of Medicaments; their symptoms and tests. They will also be required to write prescriptions in proper form on given subjects.

2. Diseases of the Liver and Kidney.

3. Dislocations and Fractures; diseases of the Bladder and Urethra; resection of joints.

4. Human Fœtus and its involucra; abortion; diseases of parturient women; diseases of childhood.

A Student to whom a Scholarship of the fourth year has been awarded shall attend during the year of his election two at least of the practical courses prescribed for the second period in the University regulations; and if more courses are required to complete the curriculum, both as to professional and non-professional subjects, he shall also attend them.

NON-MATRICULATED STUDENTS.

Any course or courses of lectures may be attended by Non-Matriculated Students, without passing any examination, on paying the regulated class fee to each Professor whose lectures they attend. Such Students are admissible to the Library on payment of a fee of Fifteen Shillings for the year.

SCHOOL OF CIVIL ENGINEERING.

Candidates for the Diploma in Civil Engineering are required :—

1. To have been admitted Matriculated Students of one of the Colleges of the Queen's University in the Department of Civil Engineering.
2. To have studied in the Colleges of the Queen's University the course herein prescribed.
3. To have passed two University Examinations.

Candidates for Matriculation are examined in the following subjects :—

MATHEMATICS.

Arithmetic :—

Including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.

Algebra :—

Including Fractions, Proportion, and the Solution of Simple Equations.

Geometry :—

Euclid, Books I., II., III., VI., with Definitions of Book V.

HISTORY, GEOGRAPHY, AND THE ENGLISH LANGUAGE.

History :—

Outlines of Ancient History.

Geography :—

Outlines of Ancient and Modern Geography.

English :—

English Grammar and Composition.

The course for the Diploma in Civil Engineering usually extends over three Sessions, and comprises attendance on the following curriculum:—

FIRST SESSION.

Mathematics (first course).
Chemistry.
A Modern Language.
Geometrical Drawing.
Office Work.

SECOND SESSION.

Mathematics (second course).
Mathematical Physics.
Experimental Physics.
Mineralogy, Geology, and Physical Geography.
Civil Engineering.
Office Work.
Field Work.

THIRD SESSION.

Natural Philosophy (applied).
Civil and Mechanical Engineering.
Office Work.
Field Work.
Engineering Excursions.

Attendance on these courses in all cases includes passing such Examinations as may be appointed by the College Council, as well as the catechetical parts of the courses of lectures.

Engineering Students must reside at their respective Colleges during at least the first two Terms of each Session, and can be exempted from residence during the third Term also, only by a special grace of the College Council.

The study of the Engineering Curriculum may be extended over more than three Sessions, on the recommendation of the College Council, and under such regulations as the Council shall impose. Some relaxation of

Appendix, No. 1.

the order in which the subjects shall be studied will be admitted, on the recommendation of the Council.

Candidates will, on the special recommendation of the College Council, be admitted to the Diploma after two years' residence instead of three, if their previous acquaintance with a sufficient group of the subjects above set down for study in the first and second Sessions is deemed by the Council satisfactory. In such cases the certificate of the Council will be accepted in lieu of attendance upon these courses, but will not exempt candidates from the University Examinations in them.

Candidates for the Diploma in Civil Engineering are required to pass two University Examinations,—the First University Examination which is held simultaneously in each of the Colleges of the University, and the Diploma Examination which is held in the Hall of the University in Dublin.

Students who have completed their second Session must attempt the First University Examination before rising to the third year, unless prevented by illness or other inevitable accident, in which case the Senate may admit them to a Supplementary Examination.

Candidates who have attempted, but failed to pass, the First University Examination in October, will be admitted to a Supplementary Examination.

First University Examination in Engineering.

The course for the First University Examination includes French; Geometrical Drawing; Mathematics (first course); Mathematics (second course); Mensuration, Levelling, and Mapping; Experimental Physics.

The Examination will be held shortly after the commencement of the College Session, upon days which will be appointed before the 1st of October.

Each candidate must forward to the Secretary, on or before the 1st of October, notice of his intention to offer himself as a candidate, and will thereupon receive intimation of the days upon which his Examination will be held.

The candidates who pass with Honors will be arranged in three classes, the names in each class being placed alphabetically.

Two Exhibitions, one of the annual value of £20 for two years, the other of the annual value of £15 for two years, will be competed for at the Honor Examination. For the regulations regarding these Exhibitions see p. 39.

Examination for the Diploma in Civil Engineering.

The Examination for the Diploma in Civil Engineering will embrace the following course:—Engineering; Mensuration, Levelling and Mapping; Mathematical Physics; Natural Philosophy, applied; Chemistry; Mineralogy, Geology, and Physical Geography. Each candidate will also be required to produce at this Examination the Field-notes and Drawings of a Survey made by him.

Candidates who have completed the Engineering Course may present themselves as candidates for the Diploma, either with Honors or without Honors.

The Examinations for the Diploma in Civil Engineering will commence on the last Tuesday in September, and end on the second Tuesday in October. The Honor Examination will precede the Pass.

Each Candidate must forward to the Secretary, on or before the 1st of

September, notice of his intention to offer himself as a candidate, and will thereupon receive intimation of the days upon which his Examination will be held. *Appendix, No. 1.*

The candidates who pass with Honors will be arranged in three classes; the names in each class will be placed alphabetically.

Candidates who take a First Class will receive a Medal and Prize.

Candidates who take a Second Class will receive a Prize.

Candidates who take a Third Class will receive a Certificate of Honor.

Candidates are recommended to provide themselves with drawing instruments and materials, viz.:—a T square; pair of set squares; pair of compasses, with pen and pencil legs; drawing-pen; 12-inch scale, divided on one edge decimally to two chains to an inch, and on the other side, duodecimally to five feet to an inch; an offset scale 20 and 40; also pencils, papers, colours, &c.

Days and Hours of Lectures.

	Subjects.	Terms.	Mon.	Tues.	Wed.	Thurs.	Friday.	Sat.
1st Year	French,	1, 2, 3,	10	.	10	10	.	.
	Chemistry,	1, 2, 3,	12	.	12	.	12	.
	Mathematics (pass),	1, 2, 3,	1	.	1	.	1	.
	Mathematics (honor),	1, 2, 3,	.	1	.	1	.	.
	Geometrical Drawing,	1, 2, 3,	11	.	11	.	11	.
	Office Work,	1, 2, 3,	2	.	2	.	2	.
2nd Year	Civil Engineering,	1, 2, 3,	10	.	10	.	10	.
	Office Work,	1, 2, 3,	2	.	2	.	2	.
	Mineralogy, &c.,	1, 2, 3,	1	.	1	.	1	.
	Mathematical Physics (pass),	.	12	.	12	.	.	.
	Experimental Physics (pass),	1, 2, 3,	.	12	.	12	.	.
	Experimental Physics (honor),	1, 2, 3,	11	.	11	.	.	.
	Mathematical Physics (honor),	1, 2, 3,	.	2	.	2	.	.
	Mathematics (honor),	1, 2, 3,	12	.	12	.	12	.
	Mathematics (pass),	1, 2, 3,	.	1	.	1	.	.
3rd Year	Civil Engineering,	1, 2, 3,	3	.	3	.	3	.
	Office Work,	1, 2, 3,	2	.	2	.	2	.
	Natural Philosophy (applied),	1, 2, 3,	.	11	.	.	.	11

SCHOLARSHIPS.

Of the five Scholarships appropriated to the Department of Engineering, two are awarded to Students of the first year, two to Students of the second year, and one to a Student of the third year.

Subjects of Examination.—First Year.

The course prescribed for Science Scholarship of the first year.

For this course, see p. 19.

Second Year.

The course of Elementary Mathematics prescribed for the Science Scholarship of the second year, together with the courses of Chemistry, Modern Languages as prescribed for Literary Scholarship of second year, Office Work, and Geometrical Drawing prescribed in the course for Students in Engineering of the first year.

Appendix, No. 1.

THIRD YEAR.

The courses of Mathematics, Mathematical and Experimental Physics, Mineralogy and Geology, Engineering and Office Work, prescribed to Honor Students of the second year.

PUBLIC COMPETITIVE EXAMINATIONS.

THE INDIAN CIVIL SERVICE.

The appointments to the Indian Civil Service have been thrown open to public competition, and are given by Examinations held under the Civil Service Commissioners.

For the subjects of Examination, and the marks allotted to each, and for the conditions under which candidates may present themselves, *see* p. 41.

As the Committee, upon whose suggestions the course was framed, contemplate that the candidates for examination for the above appointments will be, for the most part, successful competitors for the highest Collegiate and University distinctions, and anticipate that such candidates will be found to have in general aimed at attaining remarkable proficiency in some subjects of examination to the exclusion of others, classes suited to such advanced Students have been opened in Queen's College, Galway, in the following branches:—

ENGLISH LANGUAGE AND LITERATURE.—Composition, English Literature and History, including that of the Laws and Constitution. The Professor of History and English Literature will deliver two advanced courses on these subjects.

LANGUAGE, LITERATURE, AND HISTORY OF GREECE.—Two advanced courses will be delivered by the Professor of Greek, embracing all the great departments of Grecian Literature. Minute attention will be given to Grammatical Analysis, and to the Theory and Practice of Composition in Prose and Verse.

LANGUAGE, LITERATURE, AND HISTORY OF ROME.—Two advanced courses will be delivered by the Professor of Latin, embracing all the great departments of Roman Literature. Minute attention will be given to Grammatical Analysis, and to the Theory and Practice of Composition in Prose and Verse.

LANGUAGE, LITERATURE, AND HISTORY OF FRANCE—LANGUAGE, LITERATURE, AND HISTORY OF GERMANY.—The Professor of Modern Languages delivers, every Session, five courses of lectures on the Language, Literature, and History of France and Germany.

MATHEMATICS, PURE AND MIXED.—Four advanced courses will be delivered by the Professors of Mathematics and Natural Philosophy, embr acing the following branches, so far as the attainments of the classes will permit:—

Pure Mathematics:—

Differential and Integral Calculus; Calculus of Variations; Calculus of Operations; Calculus of Differences; Analytic Geometry of two and three dimensions; Pure Geometry of two and three dimensions.

Mixed Mathematics:—

Mechanics (Duhamel's Mécanique and Lagrange's Mécanique Analytique).—Astronomy—Lunar and Planetary Theories, Tides, Precession and Nutation; Figure of the Earth (Newton's Principia, and Pratt's Mechanical Philosophy).

NATURAL SCIENCES—CHEMISTRY.—A laboratory course may be taken out under the instruction of the Professor and his Assistant, in addition to the general course. *Appendix, No. 1.*

ELECTRICITY AND MAGNETISM.—An advanced course of lectures will be delivered on Experimental Physics, embracing Electricity and Magnetism, Heat, Light, and Sound.

NATURAL HISTORY, GEOLOGY, AND MINERALOGY.—The usual courses of the Professors of Natural History, and of Geology and Mineralogy, will be found sufficient.

MORAL SCIENCES.—The Professor of Logic and Metaphysics will deliver two advanced courses of lectures—one on Logic, Deductive and Inductive, and one on Moral and Political Philosophy. The Students will also be exercised in oral examination on standard authors, and in the writing of essays on the objects of the course.

Students may select at their option any of the above courses.

Fee for attendance on each course, £2, with the exception of the laboratory course in the Chemical Department, the fee for which depends on the time spent by the Student in the Laboratory.

An annual fee of Five Shillings to be paid to the College by each Student in addition to the class fees.

INDIAN ENGINEERING ESTABLISHMENT.

For the regulations for the Competitive Examination for appointments in the Indian Engineering Establishment see Appendix.

Two of the three years which candidates for the Civil Engineering Department of the Indian Service are required to pass in the office of a Civil Engineer are dispensed with in favour of Students who have studied for two years in the Engineering School of this College.

A highly advantageous arrangement has been made to enable such candidates to complete their qualifications by passing a year in the office of a Civil Engineer.

EXAMINATIONS FOR APPOINTMENTS IN THE HOME CIVIL SERVICE AND FOR DIRECT APPOINTMENTS TO THE ADVANCED OR PRACTICAL CLASS OF THE ROYAL MILITARY ACADEMY AT WOOLWICH.

Classes have been formed in the Queen's College, Galway, for the purpose of preparing Students for the Examinations prescribed for the appointments above mentioned.

Gentlemen intending to join these classes may obtain the requisite information on application to the Registrar, Queen's College, Galway.

Appendix, No. 1.

APPENDIX.

PRIZES FOUNDED BY PUBLIC SUBSCRIPTION.

At a public meeting of the University in October, 1861, Sir Robert Peel offered the sum of £1,200 to found three exhibitions* of £40 each, to be competed for annually for ten years; and he expressed his desire that these prizes should be tenable along with the small Scholarships attached to the Queen's Colleges, in order that his benefaction might have the effect of increasing the value of the rewards provided for the most deserving students.

When announcing this munificent gift, Sir Robert Peel invited others to co-operate with him in thus endeavouring to promote United Education, without adding to the burden on the public purse; and his invitation met with so ready a response, that it became necessary to form a Committee, which should take charge of the subscriptions, and make regulations for the proper allocation of the funds. This Committee consisted of Sir Robert Peel, Bart., M.P. (*Chairman*); the Duke of Leinster; the Lord Talbot de Malahide, F.R.S.; the Right Honorable Abraham Brewster, M.A., Q.C.; Sir James Emerson Tennent, LL.D.; James Naper, D.L.; Alexander Thom, Esq.; Sir Benjamin Lee Guinness, Bart.; William Malcomson, Esq.; and G. Johnstone Stoney, M.A., F.R.S. (*Honorary Secretary*).

Prizes which have been Founded.

This munificence on the part of the public has enabled the Committee to found the following prizes, to be competed for annually for ten years; and to place at interest a considerable sum,† which will accumulate and form the nucleus of a fund for continuing these most useful aids to learning beyond that time.

Exhibitions in the Faculty of Arts.

Three exhibitions of £20 a year for three years, three exhibitions of £15 a year for three years, and two exhibitions of £10 a year for three years, will be competed for annually in the Faculty of Arts. The three £20 exhibitions will be awarded to the candidates who stand foremost in order of merit from each College at the First University Examination in Arts; and the three £15 exhibitions to the candidates who stand second in order of merit from each College; provided that their names appear in the First Class of the division list at that examination. Of the two £10 exhibitions, one will be awarded to the best answerer in Mathematical Science, and the other to the best answerer in the Ancient Classics at the First University Examination. The £10 exhibitions are open to the competition of candidates from all the Colleges, and may be held along with one of the larger exhibitions.

Each candidate will be deemed a Student of that College in which he shall have attended the Lectures of the Second Session; and no Student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

* This allocation was afterwards changed, and Sir Robert Peel's benefaction merged in the general fund, in order that it might aid in establishing the connected series of prizes which the support of the public has enabled the Committee to found.

† £1,980 has been already invested, and the sum reserved for accumulation will probably be soon raised to £3,000. It is the intention of the Committee to add to the reserve fund whatever further sums may be at their disposal from lapsed exhibitions or other sources; as it is very important that the assistance which is now being afforded for ten years to students in the Queen's Colleges should not be allowed to come abruptly to an end at the close of that period.

The first instalment of each exhibition will be paid at the time of competition; the second when the exhibitioner takes the Degree of B.A. in the Queen's University, provided he graduate with honors, and within two academic years; and the third when he takes the Degree of M.A. in the Queen's University, provided he obtain it within three academic years from the time of competition.

Exhibitions in the Faculty of Medicine.

Two exhibitions, one consisting of two instalments of £20 each, and the other of two instalments of £15 each, will be competed for annually in the Faculty of Medicine. These exhibitions will be awarded for proficiency in the non-professional part of the First University Examination in Medicine: the £20 exhibition to the best answerer absolutely, in whichever of the Colleges he may have been educated; and the £15 exhibition to the candidate who is first in order of merit of the competitors from the other two Colleges: provided that their names appear in the First Class of the division list at that examination.

Each candidate will be deemed a student of that College in which he shall have attended the lectures of the Second Session; and no student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The exhibitions in Medicine will be paid in two equal instalments: one at the time of competition; the other when the exhibitioner takes the Degree of M.D. in the Queen's University, provided that he graduate with honors, and within three academic years from the time of competition.

Exhibitions in the School of Engineering.

Two exhibitions, one of £20 a year for two years, and the other of £15 a year for two years, will be competed for annually in the School of Engineering. These exhibitions will be awarded at the First University Examination in Engineering: the £20 exhibition to the best answerer absolutely, in whichever of the Colleges he may have been educated; and the £15 exhibition to the candidate who is first in order of merit of the competitors from the other two Colleges: provided that their names appear in the First Class of the division list at that examination.

Each candidate will be deemed a student of that College in which he shall have attended the lectures of the Second Session; and no student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The first instalment of each exhibition will be paid at the time of competition; the other when the exhibitioner takes the Diploma in Engineering of the Queen's University, provided that he take honors with it, and obtain it within two academic years from the time of competition.

Prizes in Composition, open to the competition of Graduates and Undergraduates.

Two prizes for English prose composition, one of £10 worth of books, and the other of £5 worth of books, have been founded, and are open to the competition of all members of the University who shall not have been graduated for more than three years at the time of competition, and who shall not have already twice obtained one or other of these prizes.

Prizes in Composition, open to the competition of all Undergraduates.

Two prizes in composition, one for English prose, the other for Greek or Latin prose, and each consisting of £5 worth of books, have been founded, and are open to the competition of all undergraduates, provided that neither the English nor the Classical prize be awarded oftener than twice to any student.

Appendix, No. 1.

Prize in Composition, limited to the competition of Undergraduates in Medicine.

A prize of £5 worth of books has been founded, for a thesis on a subject to be prescribed, and is limited to the competition of the undergraduates in Medicine who shall not have already twice received the prize.

The subjects on which the competitors for composition prizes are to write will be announced on or before the first of June in each year; the compositions, with fictitious signatures, are to be sent in to the Secretary of the University, on or before the first of the following September, and the successful competitors will be declared at the next public meeting of the University.

Prizes at Entrance.

Two prizes for English prose composition, and two prizes for Geometry, have been founded in each College, to be awarded annually at entrance: first prize for English prose composition, £3 worth of books; second do., £2 worth of books: first prize for Geometry, £3 worth of books; second do., £2 worth of books.

All the exhibitions and prizes now founded by public subscription shall be tenable along with any other scholarships, exhibitions, or prizes to which the successful competitors may be otherwise entitled.

Persons who wish to add to this Fund may find the following forms of use:—

FORM OF DONATION.

I enclose Pounds sterling, and desire that this sum be expended in founding Exhibitions or other Prizes to encourage learning and promote industry among the Students and Graduates of the Queen's University in Ireland.

Dated at this day of , 186

(Signed),

To the Right Honorable
Sir ROBERT PEEL, Bart.,
Chairman of the Committee for augmenting the Endowments of the Queen's Colleges.

FORM OF SUBSCRIPTION FOR A TERM OF YEARS.

I enclose as the First Instalment of my Subscription to the *Fund for the Endowment of Prizes, in connexion with the Queen's University in Ireland*, and I will cause an equal sum to be lodged in the Bank of Ireland to the credit of the same Fund, before the first of January in *each* of the next years.

Dated this day of , 186

(Signed),

To the Right Honorable
Sir ROBERT PEEL, Bart.,
Chairman of the Committee for augmenting the Endowments of the Queen's Colleges.

EXAMINATIONS FOR THE CIVIL SERVICE OF INDIA.

REGULATIONS for the OPEN COMPETITION of 1869.*

1. On Tuesday, March 16, 1869, and following days, an examination of candidates will be held in London. Not less than candidates will be selected, if so many shall be found duly qualified. Of these,

* The regulations are liable to be altered in future years.

will be selected for the Presidency of Bengal [for the Upper Provinces, and for the Lower Provinces], for that of Madras, and for that of Bombay.*—Notice will hereafter be given of the days and place of examination.

2. Any natural-born subject of Her Majesty, who shall be desirous of entering the Civil Service of India, will be entitled to be examined at such examination, provided he shall, on or before the 1st February, 1867, have transmitted to the Civil Service Commissioners, Dean's Yard, London, S.W.:—

(*a.*) A certificate of his birth, showing that his age on the 1st March, 1867, will be above seventeen years and under twenty-one years.

(*b.*) A certificate, signed by a physician or surgeon, of his having no disease, constitutional affection, or bodily infirmity, unfitting him for the Civil Service of India.

(*c.*) Satisfactory proof of good moral character.

(*d.*) A statement of those of the branches of knowledge hereinafter enumerated in which he desires to be examined.†

3. In any case in which a doubt may arise as to the eligibility of a candidate in respect of age, health, or character, such inquiries as may be necessary will be instituted by the Civil Service Commissioners.

4. The examination will take place only in the following branches of knowledge ‡:—

	Marks.
Language, Literature, and History of England:—	
Composition,	500
History, including that of the Laws and Constitution,	500
Language and Literature,	500
	1,500
Language, Literature, and History of Greece,	750
" " Rome,	750
" " France,	375
" " Germany,	375
" " Italy,	375
Mathematics, Pure and Mixed,	1,250
Natural Science; that is, (1.) Chemistry, including Heat, (2.) Electricity and Magnetism, (3.) Geology and Mineralogy, (4.) Zoology, (5.) Botany,	1,000
** The total (1,000 marks) may be obtained by adequate proficiency in any one or more of the five branches of knowledge included under this head.	
Moral Sciences; that is, Logic, Mental and Moral Philosophy,	500
Sanskrit Language and Literature,	375
Arabic Language and Literature,	375
	7,125

5. The merit of the persons examined will be estimated by marks, and the number set opposite to each branch in the preceding regulation denotes the greatest number of marks that can be obtained in respect of it.

6. No candidate will be allowed any marks in respect of any subject of

* The number of appointments to be made, and the number in each Presidency, &c., will be announced hereafter.

† Candidates are at liberty to send in their names and evidence of age as soon as they think fit to do so; but evidence of health and character must bear date not earlier than the 1st January, 1868.

‡ It should be understood that candidates are at liberty to name at their pleasure any or all of these branches of knowledge, and that no subjects are *obligatory*.

Appendix, No. 1.

examination unless he shall be considered to possess a *competent knowledge* of that subject.*

7. The examination will be conducted by means of printed questions and written answers, and by *vivâ voce* examination, as may be deemed necessary.

8. The marks obtained by each candidate, in respect of each of the subjects in which he shall have been examined, will be added up, and the names of the candidates who shall have obtained a greater aggregate number of marks than any of the remaining candidates will be set forth in order of merit, and such candidates shall be deemed to be selected candidates for the Civil Service of India. They shall be permitted to choose, according to the order in which they stand, as long as a choice remains, the Presidency (and in Bengal, the division of the Presidency) to which they shall be appointed.

9. Selected candidates before proceeding to India will be on probation for two years, during which time they will be examined periodically with the view of testing their progress in the following subjects † :—

	Marks.
1. Oriental Languages :—	
Sanskrit,	500
Vernacular Languages of India (each),	400
2. The History and Geography of India,	350
3. Law,	1,250
4. Political Economy,	350

In these examinations, as in the open competition, the merit of the candidates examined will be estimated by marks, and the number set opposite to each subject denotes the greatest number of marks that can be obtained in respect of it at any one examination. The examination will be conducted by means of printed questions and written answers, and by *vivâ voce* examination, as may be deemed necessary. The marks obtained at each of such periodical examinations will be added to those previously or subsequently obtained. The last of these examinations will be held at the close of the second year of probation, and will be called the "Final Examination." By the merit then shown it will be decided whether a selected candidate is qualified for the Civil Service of India.

10. No candidate will be permitted to proceed to India until he shall have passed the Final Examination, and received a certificate of qualification from the Civil Service Commissioners, or after he shall have attained the age of twenty-four years.

11. The selected candidates who at the Final Examination shall be found to have a competent knowledge of the subjects specified in Regulation 9, shall be adjudged to have passed, and to be entitled to be appointed to the Civil Service of India.

12. The seniority in the Civil Service of India of the selected candidates shall be determined according to the order in which they stand on the list resulting from the Final Examination.

13. No person will, even after passing the Final Examination, be allowed to proceed to India unless he shall comply with the regulations in force at the time for the Civil Service of India, and shall be of sound bodily health and good moral character. The Civil Service Commissioners

* "Nothing can be further from our wish than to hold out premiums for knowledge of wide surface and of small depth. *We are of opinion that a candidate ought to be allowed no credit at all for taking up a subject in which he is a mere smatterer.*"—Report of Committee of 1854.

† Full instructions as to the course of study to be pursued will be issued to the successful candidates as soon as possible after the result of the open competition is declared.

will require such further evidence on these points as they may deem necessary before granting their Certificate of Qualification. *Appendix, No. 1.*

14. Applications from persons desirous to be admitted as candidates are to be addressed to the Secretary to the Civil Service Commissioners, Dean's Yard, London, S.W.

NOTE.—(1.) The Secretary of State for India in Council has authorized the Civil Service Commissioners to state that it is his intention to allow the sum of £100 for the first year of probation, and £200 for the second year to each selected candidate who shall have passed the required examinations to the satisfaction of the Commissioners, and shall have complied with such rules as may be laid down for the guidance of selected candidates.

(2.) All selected candidates will be required, after having passed the second periodical Examination, to attend at the India Office, to make the necessary arrangements for entering into covenants (binding themselves, amongst other things, to refund in certain cases the amount of their allowance in the event of their failing to proceed to India), and for giving a bond for £1,000, jointly with two sureties, for the due fulfilment of the same. The stamps payable by civilians on their appointment amount to £3 10*s*.

(3.) Candidates rejected at the Final Examination of 1871 will in no case be allowed to present themselves for re-examination.

PARTICULARS respecting the COMPETITIVE EXAMINATION of CANDIDATES for JUNIOR APPOINTMENTS in the ENGINEER ESTABLISHMENT of the DEPARTMENT of PUBLIC WORKS in INDIA, to be held at the INDIA OFFICE in LONDON, in JULY, 1869.

Candidates must be British subjects, and must not have passed their twenty-fourth birthday (in proof of which a satisfactory certificate must be produced), and they must have complied with one or other of the three following conditions :—

1. They must have passed not less than three years as Articled Pupils of a Civil, Mechanical, or Mining Engineer ; or,
2. Not less than three years in practice under a Civil, Mechanical, or Mining Engineer ; or,
3. Not less than three years altogether, of which part may have been passed in practice under a Civil, Mechanical, or Mining Engineer, and part in studying Civil, Mechanical, or Mining Engineering, in a School or College recognised by the Secretary of State as possessing an efficient class for instruction in one or other of those professions, with the proviso that one year at least of the three must have been passed in practice under a Civil, Mechanical, or Mining Engineer.

On these points also they must be provided with satisfactory certificates, and they must likewise produce testimonials of good moral character and conduct from the engineers or professors under whom they have served, or by whom they have been instructed.

These documents must be delivered at the Department of Public Works in this office between the 1st and 29th days of June next, both inclusive, during which period only will applications be received.

The names of the candidates will then be registered, and they will be directed to appear for medical examination before the Indian Medical Board, on the first Saturday in July, between the hours of 1 and 3 P.M.

If then certified to be constitutionally fit for service in India, they will be required to attend, at 9 A.M. precisely, on the succeeding Monday and five following days at a competitive examination which will be held in this office.

The candidates will first be required to write English from dictation, and unless found able to do so with accuracy and facility, will not be permitted to remain during the subsequent examination. The other subjects

Appendix, No. 1.

of examination and the maximum number of marks obtainable for proficiency in each class of subjects will be the following :—

Mathematics.	
Arithmetic, *Mensuration*, and *Trigonometry*, including heights and distances, ...	220
Algebra: Elementary Principles; Simple and Quadratic Equations; Surds; Ratios and Proportion; Arithmetical and Geometrical Progression; Combinations, and the Binomial Theorem, . .	
Euclid: 1st, 2nd, 3rd, 4th, 6th, and first 21 Propositions of the 11th Book, ...	
Statics: Composition and Resolution of Forces, the Centre of Gravity, the Mechanical Power; Roofs, Arches, and Bridges; Strength of Materials; and Friction, ...	180
Dynamics: First Principles; Collision of Bodies; Uniformly Accelerated Motion; Circular Motion and Centrifugal Force; Labour and Machinery, ...	
Hydrostatics and *Hydraulics:* Pressure of Fluids; Specific Gravity, and Equilibrium of Floating Bodies; Elastic Fluids and Atmospheric Pressure; Hydrostatic Machines, ...	
Engineering.	
Projects for Bridges, Locks, Dams, Roads, Tramways, and other Engineering Works, ...	280
Irrigation, Drainage, Water Supply, Sewerage and Mining, . .	
Making Working Drawings of Machinery and Plans, Elevations and Sections of Buildings, ...	
Carpentry, Ironwork, and Properties of Materials in general, . .	
Free-hand Drawing, ...	
Map Drawing, ...	
Framing of Estimates and Specifications from given plans and data, .	80
Surveying.	
Trigonometrical Surveying and traversing with the Theodolite, .	240
Land Surveying with Compass and Chain, and Plotting from a Field-Book, ...	
Levelling and Use of the Instruments employed, . . .	
Geometrical Drawing, ...	
	1,000

No candidate will be passed who shall not obtain 600 marks, of which not less than 200 must be awarded for Mathematics, not less than 180 for Engineering, and not less than 100 for Surveying. The candidates who may obtain the prescribed minimum number of marks will be ranked by the Examiners in the order of the numbers they may severally obtain; and of these the twenty-five who may stand highest on the list will be nominated.

Each Nominee must, within a month of his nomination, sign a covenant, in the form hereto attached, describing the terms and conditions of his appointment, and must embark for India, when required to do so by the Secretary of State in Council, who will provide for the expenses of his passage. Any nominee not embarking, when required, will forfeit his appointment. Otherwise he will be allowed pay, at the rate of 170 rupees (which is about the equivalent of £17 in English money) a month from the date of his appointment.

N.B.—The papers given at former examinations have been printed by order of the House of Commons, and may be obtained from Messrs. Hansard, of Great Queen-street, Lincoln's-Inn-Fields.

MEMORANDUM of the TESTS to which NOMINEES will be subjected, and of the TERMS and CONDITIONS on which they will be admitted into the INDIAN GOVERNMENT TELEGRAPH DEPARTMENT (superior grades) under the new ARRANGEMENTS approved of by the RIGHT HONORABLE the SECRETARY of STATE in COUNCIL.

Nominees must be of pure European descent or British born subjects, and of not less than eighteen or more than twenty-four years of age, unless they have served for a period of not less than one year in a telegraph establishment.

A nominee will be required, in the first instance, to furnish a copy of his baptismal or registration of birth certificate; and a certificate of good conduct for the previous two years; and he must be passed by the Medical Board of this Office as possessing a constitution sufficiently vigorous to withstand fatigue and exposure in a tropical climate.

He will then be instructed when and where to attend for the purpose of being examined on the following subjects:—

	Marks.	Minimum on each Subject.
English Reading and Writing from Dictation,	300	200
HISTORY.		
English,	250	
Roman,	250	
Indian,*	250	
Greek,*	250	400
GEOGRAPHY.		
Indian,	350	
General,	350	350
MATHEMATICS.		
Arithmetic, including square and cube root,	500	250
Mensuration,	250	100
Book-keeping,	250	100
Euclid, I., II., III., IV., and VI. books,	500	200
Algebra, to Quadratic Equations,	500	200
Plane Trigonometry, including Heights and Distances, and the use of Logarithmic Tables,	750	300
CLASSICS.		
* Latin: Virgil, I., II., III. of the Æneid, or Livy, the Punic War, or Cæsar's Commentaries, * Greek: Xenophon's Anabasis, Or any other Greek author.	500	250
A modern language, other than English, *i.e.*, Spanish, French, Italian, Hindustani, &c.,	500	200
ADDITIONAL.		
Landscape Drawing,*	250	
Mechanical ditto,*	250	
Surveying ditto,*	500	
Higher Mathematics,*	1,500	
Natural Sciences, including Chemistry, Electricity, &c.,* A minimum of 3,000 marks must be obtained.	1,500	

* Subjects marked thus are optional.

Appendix, No. 1.

After passing the above preliminary examination satisfactorily, the nominee will be required to furnish security and to sign a bond or covenant for the fulfilment of the conditions hereinafter specified. He must then join a physical class, approved of by the Indian Government, at Glasgow, London, Dublin, or elsewhere, for the purpose of qualifying for a final examination in Chemistry, Electricity, and other branches of physical science connected with Electric Telegraphy; and after qualifying on those subjects to the satisfaction of the Government Examiner, he must place himself under an authorized telegraph Engineer, to be named by the Secretary of State, for the purpose of receiving full instructions in the practical construction of telegraph lines, testing, &c.

Not less than six or more than twelve months must be spent at college; and not less than four months or more than six in practical education.

Each nominee will receive the sum of £100 (one hundred pounds), to cover all expenses of college fees, &c., &c., which sum he will be required to refund should he fail either to pass a satisfactory final examination in the prescribed subjects of study on the expiration of the prescribed periods, or to proceed to India in due course.

After passing the final examination, nominees must sign covenants with the Secretary of State for India, and will be required to proceed to India within one month after date of signature.

£100 (one hundred pounds) will be allowed to each successful nominee as passage money.

On arrival in India the nominee will join the Telegraph Department as Assistant Superintendent of the 4th Class.

Revised Organization and Salaries of the Superior Grades of the Indian Telegraph Establishment.

		£		£
1	Director-General, per annum,	3,000	rising to	3,600
1	Deputy-General, ditto,	1,800,	„	2,160
	By annual increments of £60.			
4	First-class Superintendents,	1,260,	„	1,800
	By annual increments of £80.			
8	Second-class Superintendents,	960,	„	1,200
	Annual increments of £60.			
7	Third-class Superintendents,	720,	„	900
	Annual increase, £36.			
88	*Assistant Superintendents of the I., II., III., and IV. grades,	240,	„	500

In addition to the above, very liberal allowances are granted for travelling, &c.

W. T. Thornton, Secretary,
Public Works Department.

India Office, January, 1867.

Assistant Superintendents commence in the IV. grade on £240 per annum, increased to £270 after one year, provided they pass a colloquial examination in a vernacular language, &c. Every additional year of approved service entitles them to a further increase of £30, until they obtain the maximum of £500 per annum. These periods may be prolonged or shortened in special cases.

Assistant Superintendents, drawing £420 per annum, are in the first grade; those drawing £360, in the second; and those drawing £300, in the third grade. Promotions to Superintendent are only made as vacancies occur, not by right of seniority, although seniority is considered to give great claim, but by merit.

Rules of the Honorable Society of King's Inns, with regard to the Admission of Students into the Society, and to the Degree of Barrister-at-Law.

I.—Every person desirous to be admitted a Student into this Society shall, in order thereto, present at the Under-Treasurer's Office, three clear days at the least before the first day of term, a memorial in the printed form, No. 1, which memorial is to be signed and lodged by the Student himself, and the certificate annexed thereto, signed by a practising Barrister of at least ten years' standing.

II.—Every Student, on presenting such memorial, shall produce a certificate of having paid at the Stamp Office the stamp duty of twenty-five pounds sterling, and also pay to the Under-Treasurer the sum of twenty-one pounds ten shillings and four pence, including five pounds five shillings for admission to the King's Inns Library, and five pounds five shillings for lectures under the recent system of legal education—the balance being the ancient fee for admission into the Society as a Student. Students of the Colleges of the Queen's University who shall elect to attend the courses of lectures in those Colleges, as hereafter provided, are exempted from paying the above sum of five guineas for lectures.

III.—Every Student not a graduate of the University of Dublin, Oxford, Cambridge, Durham, London, or the Queen's University in Ireland, shall keep nine Terms' Commons in the Dining Hall of the Society, and also eight Terms' Commons in one of the Four Inns of Court in London, and shall lodge, with the Under-Treasurer, a certificate of having kept said eight Terms' Commons in one of the said Inns of Court in London, on presenting his memorial to be admitted to the degree of Barrister-at-Law.

IV.—Every such Student, if a graduate of any of the said Universities, is only required to keep six Terms' Commons in the Dining Hall of the King's Inns, and also six Terms' Commons in one of the Inns of Court in London.

V.—Every Student admitted into the Society after the first day of Trinity Term, one thousand eight hundred and fifty, if a graduate of the University of Dublin, Oxford, Cambridge, Durham, or London, or the Queen's University in Ireland, shall, as a condition precedent to being called to the Bar, produce certificates of his having attended two complete courses *at least* of lectures—viz., One complete course of lectures of any two, at his option, of the four Law Professors—namely, the Law Professors of the University of Dublin, and those of the King's Inns, and *at least* five-sixths of the lectures of each session or University term ; or if a graduate in arts of the Queen's University in Ireland, shall have the option of producing certificates of having attended two complete courses, at least, of lectures of each of the two Law Professors of any College of the Queen's University, comprising not less than thirty-six lectures, and at least five-sixths of the lectures of each course, and of having passed the examinations in the College to which he belongs, on the subjects of the aforesaid two courses of lectures, provided that the curriculum prescribed by the said two courses of lectures shall embrace all that is contained in the course now prescribed by the Professors of the King's Inns, or as the same may be from time to time varied by any rules of the Benchers.

VI.—Every Student admitted into the Society after the above date (if not a graduate of one of the said Universities) shall, as a condition precedent to being called to the Bar, produce certificates of his having attended

Appendix, No. 1.

four courses of lectures—viz., One course of the lectures of each of the said four Professors, and *at least* five-sixths of the lectures of each session or University term, in such manner, however, that every such Student shall be engaged not less than three years in the study of the law in Ireland, exclusive of the two years necessary for keeping terms in England, in every one of which three years, one complete course of lectures must be kept; any Student who shall produce certificates of his having attended during three years the courses of lectures delivered by the Professors of English Law and of Jurisprudence, in one of the Colleges of the Queen's University, and of his having passed the general examinations in such College on the subjects so lectured on, shall be deemed entitled to such and the same privileges, in respect to his being called to the Bar, as if he had actually attended one course of the lectures of each of the two Law Professors of the University of Dublin, and had been engaged for two years in such attendance; but this rule and the preceding one are not intended to affect the number of Terms' Commons required by the present rules of the Society, to be kept by Students of the King's Inns, prior to being called to the Bar.

VII.—If from illness or other sufficient cause any Student should be prevented from completing any course of lectures necessary towards being called to the Bar, the Legal Education Committee have power to direct what further attendance, if any, shall be sufficient in such case.—Rules as to Legal Education, No. 3.

VIII.—Every such Student, having complied with the foregoing Rules, desiring to be admitted to the degree of Barrister-at-Law, and being of the full age of twenty-one years, shall present a memorial in the printed form No. 2, at the Under-Treasurer's Office, three clear days at the least before the first day of term, said memorial to be signed by the Student himself; the certificate annexed thereto to be signed by a practising Barrister of at least ten years' standing, and the declaration at foot thereof by a Bencher.

IX.—Every such Student so applying for admission to the degree of a Barrister-at-Law shall, on presenting his said memorial, pay to the Under-Treasurer the sum of thirty-two pounds eighteen shillings and nine pence, being the ancient fee payable to the Society thereon, and lodge at the same time a certificate of having paid fifty pounds stamp duty at the Stamp Office; also a certificate of having kept the requisite number of terms from one of the Inns of Court in England; and if a graduate of any of the said Universities, shall also lodge a testimonium from such University of having obtained the degree of Bachelor of Arts or Bachelor of Law thereir.

APPENDIX, No. 2.

SCHOLARSHIP EXAMINATIONS, 1867.

Literary Scholarships of the Second Year.

Greek.—*Examiner, Professor D'Arcy Thompson,* M.A.

1. Give English of the words—*πρηνὴς, λαπάρη, ἐπιπλὼς, δάηρ, ὀτρηρὸς, ἀορτὴρ, πρυλέες, κολλητὸς, ἀνεμοτρεφὲς, ὑπερώης, κεκαδὼν, ταφών.*

2. Give Attic forms of the words—*ἐξαπολοίατο, πόλινδε, δαήμεναι, ἐπιβησέμεν, κηρόθι, λισσέσκετο, τεθνειῶτος, αἴδεσσαι, ὄμοσσε, κράτεσφι, τοῖσδεσσι, φθάν.*

3. Translate:—

> *Αὐτὰρ ὅγε κρεῖον μέγα κάββαλεν ἐν πυρὸς αὐγῇ,*
> *ἐν δ' ἄρα νῶτον ἔθηκ' ὄϊος καὶ πίονος αἰγὸς,*
> *ἐν δὲ συὸς σιάλοιο ῥάχιν τεθαλυῖαν ἀλοιφῇ.*
> *τῷ δ' ἔχεν Αὐτομέδων, τάμνεν δ' ἄρα δῖος Ἀχιλλεύς·*
> *καὶ τὰ μὲν εὖ μίστυλλε καὶ ἀμφ' ὀβελοῖσιν ἔπειρεν,*
> *πῦρ δὲ Μενοιτιάδης δαΐεν μέγα, ἰσόθεος φώς.*
> *αὐτὰρ ἐπεὶ κατὰ πῦρ ἑκάη καὶ φλὸξ ἐμαράνθη,*
> *ἀνθρακιὴν στορέσας ὀβελοὺς ἐφύπερθε τάνυσσεν·*
> *πάσσε δ' ἁλὸς θείοιο, κρατευτάων ἐπαείρας.*

(*a.*) Point out instances of the digamma in the beginning or middle of words in the above.

4. Translate:—

Περιέρρει δὲ καὶ ποταμὸς παντοδαπῶν ἰχθύων πλήρης. ἦν δὲ καὶ τὰ πτηνὰ ἄφθονα τοῖς ὀρνιθεῦσαι δυναμένοις. ἐνταῦθα μὲν δὴ διεχείμαζε, καὶ αὐτόθεν καὶ σὺν προνομαῖς τὰ ἐπιτήδεια τῇ στρατιᾷ λαμβάνων. καταφρονητικῶς δέ ποτε καὶ ἀφυλάκτως, διὰ τὸ μηδὲν πρότερον ἐσφάλθαι, λαμβανόντων τῶν στρατιωτῶν τὰ ἐπιτήδεια, ἐπέτυχεν αὐτοῖς ὁ Φαρνάβαζος κατὰ τὸ πεδίον ἐσπαρμένοις, ἅρματα μὲν ἔχων δύο δρεπανηφόρα, ἱππεῖς δὲ ὡς τετρακοσίους. οἱ δ' Ἕλληνες ὡς εἶδον αὐτὸν προσελαύνοντα, ξυνέδραμον ὡς εἰς ἑπτακοσίους· ὁ δ' οὐκ ἐμέλλησεν, ἀλλὰ προστησάμενος τὰ ἅρματα, αὐτὸς δὲ σὺν τοῖς ἱππεῦσιν ὄπισθεν γενόμενος, ἐκέλευσεν ἐλαύνειν εἰς αὐτούς. ὡς δὲ τὰ ἅρματα ἐμβαλόντα διεσκέδασε τὸ ἀθρόον, ταχὺ οἱ ἱππεῖς κατέβαλον ὡς εἰς ἑκατὸν ἀνθρώπους, οἱ δ' ἄλλοι κατέφυγον πρὸς Ἀγησίλαον· ἐγγὺς γὰρ ἔτυχε σὺν τοῖς ὁπλίταις ὤν.

(*a.*) Would *οὐδὲν* be admissible or not, instead of *μηδὲν* in the fourth line above?

(*b.*) What would be the meaning of such a word, if met with, as *δρεπανήφορος*?

(*c.*) Point out two instances in the above passage of active verbs being used in a reflective sense.

5. Translate:—

Κἀνταῦθα οἱ μέν τινες τῶν ξένων ἐστεφάνουν ἤδη τὸν Ἀγησίλαον, ἀγγέλλει δέ τις αὐτῷ, ὅτι οἱ Θηβαῖοι, τοὺς Ὀρχομενίους διακόψαντες, ἐν τοῖς σκευοφόροις εἵησαν. καὶ ὁ μὲν εὐθὺς ἐξελίξας τὴν φάλαγγα ἦγεν ἐπ' αὐτούς· οἱ δ' αὖ Θηβαῖοι ὡς εἶδον τοὺς ξυμμάχους πρὸς Ἑλικῶνα πεφευγότας, διαπεσεῖν βουλόμενοι πρὸς τοὺς ἑαυτῶν, συσπειραθέντες ἐχώρουν ἐρρωμένως. ἐνταῦθα δὴ Ἀγησίλαον ἀνδρεῖον μὲν ἔξεστιν εἰπεῖν ἀναμφισβητήτως. οὐ μέντοι εἴλετό γε τὰ ἀσφαλέστατα. ἐξὸν γὰρ αὐτῷ, παρέντι τοὺς διαπίπτοντας, ἀκολουθοῦντι χειροῦσθαι τοὺς ὄπισθεν, οὐκ ἐποίησε τοῦτο, ἀλλ' ἀντιμέτωπος συνέρραξε τοῖς Θηβαίοις· καὶ συμβαλόντες τὰς ἀσπίδας ἐωθοῦντο, ἐμάχοντο, ἀπέκτεινον, ἀπέθνησκον. τέλος δὲ τῶν Θηβαίων οἱ μὲν διαπίπτουσι πρὸς τὸν Ἑλικῶνα, πολλοὶ δὲ ἀποχωροῦντες ἀπέθανον. ἐπεὶ δὴ ἡ μὲν νίκη Ἀγησιλάου ἐγεγένητο, τετρωμένος δ' αὐτὸς προσενήνεκτο πρὸς τὴν φάλαγγα, προσελάσαντές τινες τῶν ἱππέων λέγουσιν αὐτῷ, ὅτι τῶν πολεμίων ὡς ὀγδοήκοντα σὺν ὅπλοις ὑπὸ τῷ νεῷ εἰσι, καὶ ἠρώτων, τί χρὴ ποιεῖν.

Appendix, No. 2.

Scholarship Examinations.

(*a.*) Point out instances in the above of verbs influenced by indirectness of statement—(1) where time is strictly observed, and (2) where an idiom peculiar to Greek is exemplified.

(*b.*) Give the present participles, same voice, number, and gender of ἐξελίξας, συσπειραθέντες, τετζωμένος, προσελάσαντες.

6. Translate:—

Ὁ δαίμων ὁ Διὸς παῖς
χαίρει μὲν θαλίαισιν,
φιλεῖ δ' ὀλβοδότειραν Εἰ-
ρήναν, κουροτρόφον θεάν.
ἴσα δ' εἴς τε τὸν ὄλβιον
τόν τε χείρονα δῶκ' ἔχειν
οἴνου τέρψιν ἄλυπον·
μισεῖ δ' ᾧ μὴ ταῦτα μέλει,
κατὰ φάος νύκτας τε φίλας
εὐαίωνα διαζῆν·
σοφὰν δ' ἀπέχειν πραπίδα φρένα τε,
περισσῶν παρὰ φωτῶν.
τὸ πλῆθος ὅ τι τὸ φαυλότερον
ἐνόμισε χρῆταί τε, τόδε τοι λέγοιμ' ἄν.

(*a.*) What is the government of ἀπέχειν in the last line but three?
(*b.*) Point out two incongruities of grammar in the last line.

7. Translate:—

Διαμεθεὶς δὲ τόνδε μόχθον, ὡς ἐμοῦ πεφευγότος,
ἴεται ξίφος κελαινὸν ἁρπάσας δόμων ἔσω.
κᾆθ' ὁ Βρόμιος, ὡς ἔμοιγε φαίνεται, δόξαν λέγω,
φάσμ' ἐποίησεν κατ' αὐλήν· ὁ δ' ἐπὶ τοῦθ' ὡρμημένος
ἦσσε κἀκέντει φαεννὸν αἰθέρ', ὡς σφάζων ἐμέ.
πρὸς δὲ τοῖσδ' αὐτῷ τάδ' ἄλλα Βάκχιος λυμαίνεται·
δώματ' ἔρρηξεν χαμᾶζε· συντεθράνωται δ' ἅπαν
πικροτάτους ἰδόντι δεσμοὺς τοὺς ἐμούς· κόπου δ' ὕπο
διαμεθεὶς ξίφος παζεῖται. πρὸς θεὸν γὰρ ὢν ἀνὴρ
εἰς μάχην ἐλθεῖν ἐτόλμησ'· ἥσυχος δ' ἐκβὰς ἐγὼ
δωμάτων ἥκω πρὸς ὑμᾶς, Πενθέως οὐ φροντίσας.
ὡς δέ μοι δοκεῖ, ψοφεῖ γοῦν ἀρβύλη δόμων ἔσω,
εἰς προνώπι' αὐτίχ' ἥξει· τί ποτ' ἄρ' ἐκ τούτων ἐρεῖ;
ῥᾳδίως γὰρ αὐτὸν οἴσω, κἂν πνέων ἔλθῃ μέγα.
πρὸς σοφοῦ γὰρ ἀνδρὸς ἀσκεῖν σώφρον' εὐοργησίαν.

(*a.*) Give a scheme of the metre of the above passage.
(*b.*) Give the masculine nominative singular of the present participle of διαμεθείς; the first person singular of the future active of ἴεται; the first person singular of the pluperfect passive of παρεῖται; the first person singular of the first and second aorist of ἐκβάς; and the first person singular of the present indicative of ἐρεῖ.

8. You are *not to translate* the following passage, but to read it carefully over, so as to assist you in answering the note (*a*) appended.

Ἐγὼ ὑμᾶς, ὦ ἄνδρες Ἀθηναῖοι, ἀσπάζομαι μὲν καὶ φιλῶ, πείσομαι δὲ μᾶλλον τῷ θεῷ ἢ ὑμῖν, καὶ ἕωσπερ ἂν ἐμπνέω καὶ οἷός τε ὦ, οὐ μὴ παύσωμαι φιλοσοφῶν καὶ ὑμῖν παρακελευόμενός τε καὶ ἐνδεικνύμενος ὅτῳ ἂν ἀεὶ ἐντυγχάνω ὑμῶν, λέγων οἷάπερ εἴωθα, ὅτι, Ὦ ἄριστε ἀνδρῶν, Ἀθηναῖος ὤν, πόλεως τῆς μεγίστης καὶ εὐδοκιμωτάτης εἰς σοφίαν καὶ ἰσχύν, χρημάτων μὲν οὐκ αἰσχύνει ἐπιμελούμενος, ὅπως σοι ἔσται ὡς πλεῖστα, καὶ δόξης καὶ τιμῆς φρονήσεως δὲ καὶ ἀληθείας καὶ τῆς ψυχῆς, ὅπως ὡς βελτίστη ἔσται, οὐκ ἐπιμελεῖ οὐδὲ φροντίζεις; καὶ ἐάν τις ὑμῶν ἀμφισβητήσῃ καὶ φῇ ἐπιμελεῖσθαι, οὐκ εὐθὺς ἀφήσω αὐτὸν οὐδ' ἄπειμι, ἀλλ' ἐρήσομαι αὐτὸν καὶ ἐξετάσω καὶ ἐλέγξω, καί, ἐάν μοι μὴ δοκῇ κεκτῆσθαι ἀρετήν, φάναι δέ, ὀνειδιῶ, ὅτι τὰ πλείστου ἄξια περὶ ἐλαχίστου ποιεῖται, τὰ δὲ φαυλότερα περὶ πλείονος.

(*a.*) Point out at least three expressions in the above passage where the idiom of Greek differs strikingly from that of Latin or from that of your own tongue.

1. Translate:—

Τότε μὲν δὴ τοῦτον τὸν τρόπον εἶχε τὰ πράγματα ἐκείνοις, χρωμένοις οἷς εἶπον προστάταις· νυνὶ δὲ πῶς ἡμῖν ὑπὸ τῶν χρηστῶν τῶν νῦν τὰ πράγματα ἔχει; ἆρά γε ὁμοίως καὶ παραπλησίως; οἳ—τὰ μὲν ἄλλα σιωπῶ, πόλλ' ἂν ἔχων εἰπεῖν, ἀλλ' ὅσης ἅπαντες ὁρᾶτε ἐρημίας ἐπειλημμένοι, καὶ Λακεδαιμονίων μὲν ἀπολωλότων, Θηβαίων δ' ἀσχόλων ὄντων, τῶν δ' ἄλλων οὐδενὸς ὄντος ἀξιόχρεω περὶ τῶν πρωτείων ἡμῖν ἀντιτάξασθαι, ἐξὸν ἡμῖν καὶ τὰ ἡμέτερ' αὐτῶν ἀσφαλῶς ἔχειν καὶ τὰ τῶν ἄλλων δίκαια βραβεύειν, ἀπεστερήμεθα μὲν χώρας οἰκείας, πλείω δ' ἢ χίλια καὶ πεντακόσια τάλαντα ἀνηλώκαμεν εἰς οὐδὲν δέον, οὓς δ' ἐν τῷ πολέμῳ συμμάχους ἐκτησάμεθα, εἰρήνης οὔσης ἀπολωλέκασιν οὗτοι, ἐχθρὸν δ' ἐφ' ἡμᾶς αὐτοὺς τηλικοῦτον ἠσκήκαμεν. ἢ φρασάτω τις ἐμοὶ παρελθών, πόθεν ἄλλοθεν ἰσχυρὸς γέγονεν ἢ παρ' ἡμῶν αὐτῶν Φίλιππος. ἀλλ' ὦ τᾶν, εἰ ταῦτα φαύλως, τά γ' ἐν αὐτῇ τῇ πόλει νῦν ἄμεινον ἔχει. καὶ τί ἂν εἰπεῖν τις ἔχοι; τὰς ἐπάλξεις ἃς κονιῶμεν, καὶ τὰς ὁδοὺς ἃς ἐπισκευάζομεν, καὶ κρήνας, καὶ λήρους; ἀπ βλέψατε δὴ πρὸς τοὺς ταῦτα πολιτευομένους, ὧν οἱ μὲν ἐκ πτωχῶν πλούσιο γεγόνασιν, οἱ δ' ἐξ ἀδόξων ἔντιμοι, ἔνιοι δὲ τὰς ἰδίας οἰκίας τῶν δημοσίων οἰκοδομημάτων σεμνοτέρας εἰσὶ κατεσκευασμένοι, ὅσῳ δὲ τὰ τῆς πόλεως ἥλαττω γέγονε, τοσούτῳ τὰ τούτων ηὔξηται.

(*a.*) Point out in the above passage an instance or instances of (1) an active verb used reflectively; (2) of an attraction in case of the relative; (3) and of peculiarity in accentuation.

2. Render into Greek the following:—

When, then, Athenians, will you do what you ought to do? Are you waiting for something to occur, for some critical emergency to coerce you? Why, what else you think of the actual condition of affairs? For my own part I am disposed to think that the disgrace in which their conduct involves them is stimulant enough in the estimation of free men. Are you disposed to walk up and down the agora and ask one of another "Is there any news?"—"Why, what news could be stranger than that a Macedonian were warring down Athenians and administrating the affairs of Hellas?" "Is Philip dead?"—"No, faith; but he's ill." And what does it matter to you whether he be dead or alive? If anything happen to him, you will soon create a second Philip for yourselves, if you attend to business after this fashion; for it is not to his own powers that his aggrandisement has been due, but to your carelessness.

3. Give dates, exact or approximate, of the foundation of Syracuse—the death of Thales—the death of Pythagoras—the defeat of the Athenians before Syracuse—the death of Socrates—the peace of Antalcidas—the battle of Leuctra—the death of Alexander.

4. Of what events do the following dates remind you:—B.C. 623—B.C. 354—B.C. 429—B.C. 404—B.C. 86—B.C. 490—B.C. 330—B.C. 776.

5. Give the positions of Sicyon, Decelcia, Megalopolis, Selinus, Arbela, Sellasia, Naxos, Thurium, Mitylene, Metapontum, Cythera, Haliartus.

Literary Scholarships of the First Year.

Homer—Euripides—Lucian—Geography.

Greek.—*Examiner, Professor D'Arcy Thompson,* M.A.

1. Translate.

Τέκνον, τίπτε λιπὼν πόλεμον θρασὺν εἰλήλουθας;
ἦ μάλα δὴ τείρουσι δυσώνυμοι υἷες Ἀχαιῶν
μαρνάμενοι περὶ ἄστυ· σὲ δ' ἐνθάδε θυμὸς ἀνῆκεν
ἐλθόντ' ἐξ ἄκρης πόλιος Διὶ χεῖρας ἀνασχεῖν.
ἀλλὰ μέν', ὄφρα κέ τοι μελιηδέα οἶνον ἐνείκω,

Appendix, No. 2.

Scholarship Examinations.

ὡς σπείσῃς Διὶ πατρὶ καὶ ἄλλοις ἀθανάτοισιν
πρῶτον, ἔπειτα δέ κ' αὐτὸς ὀνήσεαι, αἴ κε πίῃσθα.
ἀνδρὶ δὲ κεκμηῶτι μένος μέγα οἶνος ἀέξει,
ὡς τύνη κέκμηκας ἀμύνων σοῖσιν ἕτῃσιν.

(*a.*) What two words are contracted into τίπτε?

(*b.*) How would you write the words or expressions, πόλιος, μελιηδέα, ὀνησέαι, αἴκε πίῃσθα, κεκμηῶτι, σοῖσιν ἕτῃσιν, in Attic Greek?

2. Translate:—

Ενθα μὲν ἡίθεοι καὶ παρθένοι ἀλφεσίβοιαι
ὠρχεῦντ', ἀλλήλων ἐπὶ καρπῷ χεῖρας ἔχοντες.
των δ' αἱ μὲν λεπτὰς ὀθόνας ἔχον, οἱ δὲ χιτῶνας
εἵαρ' ἐϋννήτους, ἦκα στίλβοντας ἐλαίῳ·
καί ῥ' αἱ μὲν καλὰς στεφάνας ἔχον, οἱ δὲ μαχαίρας
εἶχον χρυσείας ἐξ ἀργυρέων τελαμώνων.
οἱ δ' ὁτὲ μὲν θρέξασκον ἐπισταμένοισι πόδεσσιν
ῥεῖα μάλ', ὡς ὅτε τις τροχὸν ἅρμενον ἐν παλάμῃσιν
ἑζόμενος κεραμεὺς πειρήσεται, αἴ κε θέῃσιν·
ἄλλοτε δ' αὖ θρέξασκον ἐπὶ στίχας ἀλλήλοισιν.
πολλὸς δ' ἱμερόεντα χορὸν περίσταθ' ὅμιλος
τερπόμενοι· μετὰ δέ σφιν ἐμέλπετο θεῖος ἀοιδὸς
φορμίζων· δοιὼ δὲ κυβιστητῆρε κατ' αὐτοὺς
μολπῆς ἐξάρχοντος ἐδίνευον κατὰ μέσσους.

(*a.*) Write in Attic Greek the words ὠρχεῦντο, ἔχον, θρέξασκον, θέῃσιν, πολλὸς, μέσσους.

(*b.*) With what verb is κεραμεὺς connected?

(*c.*) Give the future, first aorist, and second aorist, active, first person singular, of περίστατο.

(*d.*) Some read ἐξάρχοντες in the last line above. Which reading do you prefer? Give the reasons for your preference.

3. Translate:—

ΧΟΡΟΣ. Κρέον, τί σιγᾷς γῆρυν ἄφθογγον σχάσας;
κἀμοὶ γὰρ οὐδὲν ἧσσον ἔκπληξις πάρα.
ΚΡΕΩΝ. Τί δ' ἄν τις εἴποι; δῆλον οἵ γ' ἐμοὶ λόγοι.
ἐγὼ γὰρ οὔποτ' εἰς τόδ' εἶμι συμφορᾶς,
ὥστε σφαγέντα παῖδα προσθεῖναι πόλει.
πᾶσιν γὰρ ἀνθρώποισι φιλότεκνος βίος,
οὐδ' ἂν τὸν αὐτοῦ παῖδά τις δοίη κτανεῖν.
μή μ' εὐλογείτω τἀμά τις κτείνων τέκνα.
αὐτὸς δ', ἐν ὡραίῳ γὰρ ἔσταμεν βίῳ,
θνήσκειν ἕτοιμος πατρίδος ἐκλυτήριον.
ἀλλ' εἶα, τέκνον, πρὶν μαθεῖν πᾶσαν πόλιν,
ἀκόλαστ' ἐάσας μάντεως θεσπίσματα,
φεῦγ' ὡς τάχιστα τῆσδ' ἀπαλλαχθεὶς χθονός·
λέξει γὰρ ἀρχαῖς καὶ στρατηλάταις τάδε,
πύλας ἐφ' ἑπτὰ καὶ λοχαγέτας μολών·
κἂν μὲν φθάσωμεν, ἔστι σοι σωτηρία·
ἢν δ' ὑστερήσῃς, οἰχόμεσθα, κατθανεῖ.

(*a.*) Give the present participle of σχάσας.

(*b.*) Parse πάρα, in the second line above.

(*c.*) Point out any peculiarity of scansion in the fifth line.

(*d.*) Give the first person singular of the first aorist active of προσθεῖναι.

(*e.*) Give the accusative plural feminine of φιλότεκνος.

(*f.*) What part of speech is πρὶν in the eleventh line?

(*g.*) Write in full the tense of κατθανεῖ.

4. Translate:—

Ψήφισμα.

Ἐπειδὴ πολλὰ καὶ παράνομα οἱ πλούσιοι δρῶσι παρὰ τὸν βίον ἁρπάζοντες καὶ βιαζόμενοι καὶ πάντα τρόπον τῶν πενήτων καταφρονοῦντες, Δέδοκται τῇ βουλῇ καὶ τῷ δήμῳ, ἐπειδὰν ἀποθάνωσι, τὰ μὲν σώματα αὐτῶν κολάζεσθαι, καθάπερ καὶ τὰ τῶν ἄλλων πονηρῶν· τὰς δὲ ψυχὰς, ἀναπεμφθείσας ἄνω ἐς τὸν βίον, καταδύεσθαι ἐς τοὺς ὄνους, ἄχρις ἂν ἐν τῷ τοιούτῳ διαγάγωσι μυριάδας ἐτῶν πέντε καὶ εἴκοσιν, ὄνοι ἐξ ὄνων γιγνόμενοι, καὶ ἀχθοφοροῦντες, καὶ ὑπὸ τῶν πενήτων ἐλαυνόμενοι· τοὐντεῦθεν δὲ λοιπὸν ἐξεῖναι αὐτοῖς ἀποθανεῖν. Εἶπε τὴν γνώμην Κρανίων Σκελετίωνος Νεκυσιεὺς, φυλῆς Αἰγαντίδος. Τούτου ἀναγνωσθέντος τοῦ ψηφίσματος ἐπεψήφισαν μὲν αἱ ἀρχαὶ, ἐπεχειροτόνησε δὲ τὸ πλῆθος, καὶ ἐνεβριμήσατο ἡ Βριμὼ, καὶ ὑλάκτησεν ὁ Κέρβερος· οὕτω γὰρ ἐντελῆ γίγνεται, καὶ κύρια τὰ ἀνεγνωσμένα.

(*a.*) In what sense is *βιαζόμενοι* used above?

(*b.*) Give the subject or nominative case to *δέδοκται* above.

(*c.*) Give the various meanings of *καταγινώσκω*, *συγγινώσκω*, and *ἀναγινώσκω*.

5. What is meant by the expressions *τὰ πρὸ Εὐκλείδου, ἔχει τις ὑπὸ μάλης τι, Σικράνους ἐξωθεῖν, ἄνθρακας εὑρέ τις ἀνεγρόμενος.*

6. Give the positions of Naupactus, Cumæ, Sybaris, Pella, Miletus, Agrigentum, Chalcedon, Acharnæ, Delium, Syros, the Granicus, Mitylene.

History—Xenophon—Composition.

1. Name, without comment, what you consider as the six most prominent names in the Peloponnesian War.

2. Give the dates of the expulsion of Hippias from Athens; the banishment of Themistocles; the plague of Athens; the expedition of the Ten Thousand; the battle of Leuctra; the death of Philip.

3. State briefly what you know of Thales, Pythagoras, Phocion.

4. Translate:—

Ἐκ τούτου Ξενοφῶν ἀνίσταται ἐσταλμένος ἐπὶ πόλεμον ὡς ἐδύνατο κάλλιστα, νομίζων, εἴτε νίκην διδοῖεν οἱ θεοί, τὸν κάλλιστον κόσμον τῷ νικᾶν πρέπειν, εἴτε τελευτᾶν δέοι, ὀρθῶς ἔχειν τῶν καλλίστων ἑαυτὸν ἀξιώσαντα ἐν τούτοις τῆς τελευτῆς τυγχάνειν· τοῦ λόγου δὲ ἦρχετο ὧδε. Τὴν μὲν τῶν βαρβάρων ἐπιορκίαν τε καὶ ἀπιστίαν λέγει μὲν Κλεάνωρ, ἐπίστασθε δὲ καὶ ὑμεῖς, οἶμαι. εἰ μὲν οὖν βουλευόμεθα πάλιν αὐτοῖς διὰ φιλίας ἰέναι, ἀνάγκη ἡμᾶς πολλὴν ἀθυμίαν ἔχειν, ὁρῶντας καὶ τοὺς στρατηγούς, οἳ διὰ πίστεως αὐτοῖς ἑαυτοὺς ἐνεχείρισαν, οἷα πεπόνθασιν· εἰ μέντοι διανοούμεθα σὺν τοῖς ὅπλοις ὧν τε πεποιήκασι δίκην ἐπιθεῖναι αὐτοῖς καὶ τὸ λοιπὸν διὰ παντὸς πολέμου αὐτοῖς ἰέναι, σὺν τοῖς θεοῖς πολλαὶ ἡμῖν καὶ καλαὶ ἐλπίδες εἰσὶ σωτηρίας. τοῦτο δὲ λέγοντος αὐτοῦ πτάρνυταί τις· ἀκούσαντες δ' οἱ στρατιῶται πάντες μιᾷ ὁρμῇ προσεκύνησαν τὸν θεόν, καὶ Ξενοφῶν εἶπε, Δοκεῖ μοι, ὦ ἄνδρες, ἐπεὶ περὶ σωτηρίας ἡμῶν λεγόντων οἰωνὸς τοῦ Διὸς τοῦ σωτῆρος φάνη, εὔξασθαι τῷ θεῷ τούτῳ θύσειν σωτήρια ὅπου ἂν πρῶτον εἰς φιλίαν χώραν ἀφικώμεθα, συνεπεύξασθαι δὲ καὶ τοῖς ἄλλοις θεοῖς θύσειν κατὰ δύναμιν. καὶ ὅτῳ δοκεῖ ταῦτ', ἔφη, ἀνατεινάτω τὴν χεῖρα. καὶ ἀνέτειναν πάντες. ἐκ τούτου εὔξαντο καὶ ἐπαιώνισαν.

(*a.*) Give the first person singular of the first aorist active of *ἐσταλμένος*.

(*b.*) Mention any expressions resembling that of *διὰ φιλίας ἰέναι*.

(*c.*) Point out in the above an instance of the relative attracted into the case of its antecedent.

(*d.*) Is *τοὺς στρατηγοὺς* the real object to *ὁρῶντας*? If not, what is?

(*e.*) Write out, with accentuation, the plural number of the future and first aorist active of *ἀνατεινάτω*.

Appendix, No. 2.

Scholarship Examinations.

5. Render into Greek the following:—

(*a.*) He was more brave than wise.
(*b.*) If I have[1] the money, I will give it you.
(*c.*) If I were present, I would say this (ταῦτα).
(*d.*) If I had[2] the book, I would show it him.
(*e.*) If I had killed the man, I should have been killed myself.
(*f.*) I love all that[3] love me.
(*g.*) He went away, when-he-might[4] have staid[5].
(*h.*) We must[6] set about the work in good earnest.
(*i.*) The man is not[7] capable of good actions.
(*j.*) You said you would be present in-person[8].
(*k.*) The philosophers of old were-of-this-opinion[9].
(*l.*) In-the-days[10] of our fathers men were not of this opinion.

[1] Doubt is implied. [2] If I had the book, *which I have not.* [3] Use the participle [4] Nominative absolute. [5] Infinitive mood of διαμένω. When would the aoris infinitive be used in preference to the infinitive present-and-imperfect? [6] Gerun dial. [7] Verbal adjective in κός. [8] A word answering to "*ipse.*" [9] "*Though this.*" [10] A preposition.

Literary Scholarships of the Second Year.

Latin.—*Examiner, Professor Bagley,* M.A.

Translate:—

Terence—*Hecyra,* Act iii., Sc. 1.

Pamphilus—Parmeno—Myrrina.

Pam. Nemini ego plura esse acerba credo ex amore homini umquam oblata
Quam mi. Heu me infelicem, hancine ego uitam parsi perdere!
Hacine causa ego eram tanto opere cupidus redeundi domum! hui,
Quanto fuerat praestabilius ubiuis gentium agere aetatem
Quam huc redire atque haec ita esse miserum me resciscere.
Nam nos omnes quibus est alicunde aliquis obiectus labos,
Omne quod est interea tempus prius quam id rescitumst lucrost.
Par. At sic citius qui te expedias his aerumnis reperias.
Si non rediisses, haec irae factae essent multo ampliores:
Sed nunc aduentum tuom ambas, Pamphile, scio reuerituras.
Rem cognosces: iram expedies: rursum in gratiam restitues.
Leuia sunt, quae tu pergrauia esse in animum induxti tuom.
Pam. Quid consolare me? an quisquam usquam gentiumst aeque miser?
Prius quam hanc uxorem duxi, habebam alibi animum amori deditum:
Tamen numquam ausus sum recusare eam quam mi obtrudit pater:
Iam in hac re, ut taceam, quoiuis facile scitust quam fuerim miser.
Vix me illim abstraxi atque inpeditum in ea expediui animum meum,
Vixque huc contuleram: em noua res ortast porro ab hac quae me abstrahat.
Tum matrem ex ea re me aut uxorem in culpa inuenturum arbitror:
Quod quom ita esse inuenero, quid restat nisi porro ut fiam miser?
Nam matris ferre iniurias me, Parmeno, pietas iubet:
Tum uxori obnoxius sum: ita olim suo me ingenio pertulit,
Tot meas iniurias quae numquam in ullo patefecit loco.
Sed magnum nescio quid necessest euenisse, Parmeno,
Unde ira inter eas intercessit, quae tam permansit diu.
Par. Aut hercle paruom, si uis uero ueram rationem exequi.
Non maxumas, quae maxumae sunt interdum irae, iniuriae
Faciunt: nam saepe est, quibus in rebus alius ne iratus quidemst,
Quom de eadem causast iracundus factus inimicissumus.
Pueri inter sese quam pro leuibus noxiis iras gerunt!
Quapropter? quia enim qui eos gubernat animus infirmum gerunt.
Itidem illae mulieres sunt ferme ut pueri leui sententia:
Fortasse unum aliquod uerbum inter eas iram hanc conciuisse, ere.

Pam. Abi, Parmeno, intro ac me uenisse nuntia. *Par.* Hem, quid hoc est? *Pam.* Tace.
Trepidari sentio et cursari rursum prorsum. *Par.* Age dum, ad foris
Accedo propius. Hem, sensistin? *Pam.* Noli fabularier.
Pro Iuppiter, clamorem audiui. *Par.* Tute loqueris, me uetas.
My. Tace obsecro, mea gnata. *Pam.* Matris uox uisast Philumenae.
Nullus sum. *Par.* Qui dum? *Pam.* Perii. *Par.* Quamobrem? *Pam.* Nescio quod magnum malum
Profecto, Parmeno, me celas. *Par.* Vxorem Philumenam
Pauitare nescio quid dixerunt: id si forte est nescio.
Pam. Interii: quor id mihi non dixti? *Par.* Quia non poteram una omnia.
Pam. Quid morbi est? *Par.* Nescio. *Pam.* Quid? nemon medicum adduxit? *Par.* Nescio.
Pam. Cesso hinc ire intro, ut hoc quam primum, quidquid est, certo sciam?
Quo nam modo, Philumena mea, nunc te offendam adfectam?
Nam si periclum ullum in te inest, perisse me una haud dubiumst.
Par. Non usus factost mihi nunc hunc intro sequi:
Nam inuisos omnis nos esse illis sentio:
Heri nemo uoluit Sostratam intro admittere.
Si forte morbus amplior factus siet,
Quod sane nolim, maxume eri causa mei:
Seruom ilico intro iuisse dicent Sostratae,
Aliquid tulisse comminiscentur mali
Capiti atque aetati illorum, morbus qui auctus sit.
Era in crimen ueniet, ego uero in magnum malum.

VIRGIL—*Georgics*, iv., 251–280.

Si vero quoniam casus apibus quoque nostros
Vita tulit, tristi languebant corpora morbo,
Quod iam non dubiis poteris cognoscere signis—
Continuo est aegris alius color; horrida vultum
Deformat macies; tum corpora luce carentum
Exportant tectis et tristia funera ducunt;
Aut illae pedibus connexae ad limina pendent,
Aut intus clausis cunctantur in aedibus, omnes
Ignavaeque fame et contracto frigore pigrae.
Tum sonus auditur gravior, tractimque susurrant,
Frigidus ut quondam silvis immurmurat Auster,
Ut mare sollicitum stridit refluentibus undis,
Aestuat ut clausis rapidus fornacibus ignis:—
Hic iam galbaneos suadebo incendere odores,
Mellaque arundineis inferre canalibus, ultro,
Hortantem et fessas ad pabula nota vocantem.
Proderit et tunsum gallae admiscere saporem
Arentesque rosas, aut igni pinguia multo
Defruta, vel Psythia passos de vite racemos
Cecropiumque thymum et grave olentia centaurea.
Est etiam flos in pratis, cui nomen amello
Fecere agricolae, facilis quaerentibus herba—
Namque uno ingentem tollit de cespite silvam,
Aureus ipse, sed in foliis, quae plurima circum
Funduntur, violae sublucet purpura nigrae;
[Saepe deûm nexis ornatae torquibus arae;]
Asper in ore sapor; tonsis in vallibus illum
Pastores et curva legunt prope flumina Mellae:—
Huius odorato radices incoque Baccho,
Pabulaque in foribus plenis appone canistris.

Translate into Latin prose:—

No sooner was it known that these towns, the latter of which is not two days' march from Paris, were in the hands of the enemy, than that great capital, defenceless, and susceptible of any violent alarm in proportion to its greatness, was filled with consternation. The inhabitants, as if the Emperor had been already at their gates, fled in the wildest confusion and despair, many sending their wives and children down the Seine to Rouen, others to Orleans and the towns upon the

Appendix, No. 2.

Scholarship Examinations.

Loire. Francis himself, more afflicted with this than with any other event during his reign, and sensible as well of the triumph that his rival would enjoy in insulting his capital, as of the danger to which his kingdom was exposed, could not refrain from crying out in the first emotion of surprise and sorrow: "How dear, O my God, do I pay for this crown, which I thought Thou hadst granted me freely!" But recovering in a moment from this sudden sally of peevishness and impatience, he devoutly added: "Thy will be done," and proceeded to issue the necessary orders for opposing the enemy with his usual activity and presence of mind.—*Robertson.*

Translate:—

CICERO—*Tusculan Disputations*, i., 34.

M. Video te alte spectare et velle in caelum migrare. *A.* Spero fore ut contingat id nobis. Sed fac, ut isti volunt, animos non remanere post mortem; video nos, si ita sit, privari spe beatioris vitae. *M.* Mali vero quid adfert ista sententia? Fac enim sic animum interire, ut corpus; num igitur aliquis dolor aut omnino post mortem sensus in corpore est? Nemo id quidem dicit, etsi Democritum insimulat Epicurus, Democritii negant. Ne in animo quidem igitur sensus remanet: ipse enim nusquam est. Ubi igitur malum est, quoniam nihil tertium est? an [quoniam] ipse animi discessus a corpore non fit sine dolore? Ut credam ita esse, quam est id exiguum! Sed falsum esse arbitror; et fit plerumque sine sensu, nonnumquam etiam cum voluptate, totumque hoc leve est, qualecumque est: fit enim ad punctum temporis. Illud angit vel potius excruciat, discessus ab omnibus iis, quae sunt bona in vita. Vide ne "a malis" dici uerius possit. Quid ego nunc lugeam vitam hominum? Vere et iure possum. Sed quid necesse est, quum id agam, ne post mortem miseros nos putemus fore, etiam vitam efficere deplorando miseriorem? Fecimus hoc in eo libro, in quo nosmet ipsos quantum potuimus consolati sumus. A malis igitur mors abducit, non a bonis, verum si quaerimus. Et quidem hoc a Cyrenaico Hegesia sic copiose disputatur, ut is a rege Ptolemaeo prohibitus esse dicatur illa in scholis dicere, quod multi iis auditis mortem sibi ipsi consciscerent. Callimachi quidem epigramma in Ambraciotam Cleombrotum est, quem ait, quum ei nihil accidisset adversi, e muro se in mare abiecisse, lecto Platonis libro. Eius autem quem dixi, Hegesiae liber est, Ἀποκαρτερῶν, [in] quo a vita quidam per inediam discedens revocatur ab amicis, quibus respondens vitae humanae enumerat incommoda. Possem id facere, etsi minus quam ille, qui omnino vivere expedire nemini putat. Mitto alios: etiamne nobis expedit? qui et domesticis et forensibus solaciis ornamentisque privati certe, si ante occidissemus, mors nos a malis, non a bonis abstraxisset.

(*a.*) Give some account of the atomic theory of Democritus. Who was its author?

(*b.*) Who was the founder of the Cyrenaic school of philosophy, and what were its tenets?

(*c.*) What domestic and public misfortunes does Cicero refer to in the foregoing passage?

CICERO—*To Atticus*, i., 2.

L. Julio Caesare C. Marcio Figulo consulibus filiolo me auctum scito salva Terentia. Abs te tam diu nihil litterarum? Ego de meis ad te rationibus scripsi antea diligenter. Hoc tempore Catilinam, competitorem nostrum, defendere cogitamus. Indices habemus, quos volumus, summa accusatoris voluntate. Spero, si absolutus erit, coniunctiorem illum nobis fore in ratione petitionis: sin aliter acciderit, humaniter feremus. Tuo adventu nobis opus est maturo: nam prorsus summa hominum est opinio tuos familiares, nobiles homines, adversarios honori nostro fore. Ad eorum voluntatem mihi conciliandam maximo te mihi usui fore video. Quare Ianuario ineunte, ut constituisti, cura ut Romae sis.

In what year was the preceding letter written, and of what crime was Catiline accused? What office was Cicero seeking at the time?

TACITUS—*Annals*, ii., 14.

Nox eadem laetam Germanico quietem tulit, viditque se operatum et sanguine sacri respersa praetexta pulchriorem aliam manibus aviae Augustae accepisse. Auctus omine, addicentibus auspiciis, vocat contionem, et quae sapientiae prae-

visa aptaque inminenti pugnae disserit, Non campos modo militi Romano ad proelium bonos, sed si ratio adsit, silvas et saltus: nec enim inmensa barbarorum scuta, enormis hastas inter truncos arborum et enata humo virgulta perinde haberi quam pila et gladios et haerentia corpori tegmina. Denserent ictus, ora mucronibus quaererent: non loricam Germano, non galeam, ne scuta quidem ferro nervove firmata, sed viminum textus vel tenuis et fucatas colore tabulas; primam utcumque aciem hastatam, ceteris praeusta aut brevia tela. Iam corpus ut visu torvum et ad brevem impetum validum, sic nulla vulnerum patientia: sine pudore flagitii, sine cura ducum abire, fugere: pavidos adversis, inter secunda non divini, non humani iuris memores. Si taedio viarum ac maris finem cupiant, hac acie parari: propiorem iam Albim quam Rhenum neque bellum ultra, modo se, patris patruique vestigia prementem, isdem in terris victorem sisterent.

Translate into Latin hexameters:—

The riders rode abreast, and one his shield,
His lance of cornel-wood another held;
The third his bow, and glorious to behold,
The costly quiver, all of burnished gold.
The noblest of the Grecians next appear,
And weeping, on their shoulders bore the bier;
With sober pace they march'd, and often staid,
And thro' the master-street the corpse convey'd.
The houses to their tops with black were spread;
And ev'n the pavements were with mourning hid.

DRYDEN.

LITERARY SCHOLARSHIPS OF THE FIRST YEAR.

LATIN—*Examiner, Professor Bagley,* M.A.

Translate:—

VIRGIL—*Aeneid,* vi.

Illae autem, paribus quas fulgere cernis in armis,
Concordes animae nunc et dum nocte premuntur,
Heu quantum inter se bellum, si lumina vitae
Attigerint, quantas acies stragemque ciebunt!
Aggeribus socer Alpinis atque arce Monoeci
Descendens, gener adversis instructus Eois.
Ne, pueri, ne tanta animis adsuescite bella,
Neu patriae validas in viscera vertite vires;
Tuque prior, tu parce, genus qui ducis Olympo,
Proiice tela manu, sanguis meus!—
Ille triumphata Capitolia ad alta Corintho
Victor aget currum, caesis insignis Achiuis
Eruet ille Argos Agamemnoniasque Mycenas,
Ipsumque Aeaciden, genus armipotentis Achilli,
Ultus avos Troiae, templa et temerata Minervae.
Quis te, magne Cato, tacitum, aut te, Cosse, relinquat?
Quis Gracchi genus, aut geminos, duo fulmina belli,
Scipiadas, cladem Libyae, parvoque potentem
Fabricium, vel te sulco, Serrane, serentem?
Quo fessum rapitis, Fabii? Tu Maximus ille es,
Unus qui nobis cunctando restituis rem.
Excudent alii spirantia mollius aera,
Credo equidem, vivos ducent de marmore vultus,
Orabunt causas melius, coelique meatus
Describent radio et surgentia sidera dicent:
Tu regere imperio populos, Romane, memento;
Hae tibi erunt artes; pacisque imponere morem,
Parcere subiectis et debellare superbos.

Give some account of the persons mentioned above.

Appendix, No. 2.

Scholarship Examinations.

HORACE—*Odes*, i., 8.

Lydia, dic, per omnes
Te deos oro, Sybarin cur properas amando
Perdere? cur apricum
Oderit campum patiens pulveris atque solis?
Cur neque militaris
Inter aequales equitat, Gallica nec lupatis
Temperat ora frenis?
Cur timet flavum Tiberim tangere? cur olivum
Sanguine viperino
Cautius vitat, neque iam livida gestat armis
Brachia, saepe disco,
Saepe trans finem iaculo nobilis expedito?
Quid latet, ut marinae
Filium dicunt Thetidis sub lacrimosa Troiae
Funera, ne virilis
Cultus in caedem et Lycias proriperet catervas?

Name and explain the metre of the preceding Ode.

HORACE—*Epistles*, i., 8.

Celso gaudere et bene rem gerere Albinovano
Musa rogata refer, comiti scribaeque Neronis.
Si quaeret quid agam, dic multa et pulchra minantem
Vivere nec recte nec suaviter; haud quia grando
Contuderit vites oleamque momorderit aestus.
Nec quia longinquis armentum aegrotet in agris;
Sed quia mente minus validus quam corpore toto
Nil audire velim, nil discere, quod levet aegrum;
Fidis offendar medicis, irascar amicis,
Cur me funesto properent arcere veterno;
Quae nocuere sequar, fugiam quae profore credam;
Romae Tibur amem ventosus, Tibure Romam.
Post haec ut valeat quo pacto rem gerat et se,
Ut placeat iuveni percontare utque cohorti.
Si dicet, Recte, primum gaudere, subinde
Praeceptum auriculis hoc instillare memento:
Ut tu fortunam, sic nos te, Celse, feremus.

Give some account of the *juvenis* mentioned above, and some explanation of the word *cohorti*. Quote another passage in Horace where *cur* is used as in v. 10.

Translate into Latin:—

Then the wicked Tullia mounted her chariot, and drove into the forum, nothing ashamed to go amidst the multitude of men, and she called Lucius out from the senate house, and said to him, "Hail to thee, King Tarquinius." But Lucius bade her to go home; and as she was going home, the body of her father was lying in the way. The driver of the chariot stopped short, and showed Tullia where her father lay in his blood. But she bade him drive on, for the furies of her wickedness were upon her, and the chariot rolled over the body; and she went to her home with her father's blood upon the wheels of her chariot.

Translate:—

CICERO—*Pro lege Manilia*, xii.

Sed quid ego longinqua commemoro? Fuit hoc quondam, fuit proprium populi Romani, longe a domo bellare et propugnaculis imperii sociorum fortunas, non sua tecta defendere. Sociis ego nostris mare per hos annos clausum fuisse dicam, quum exercitus vestri numquam a Brundisio nisi hieme summa transmiserint? Qui ad vos ab exteris nationibus venirent, captos querar, quum legati populi Romani redempti sint? Mercatoribus tutum mare non fuisse dicam, quum duodecim secures in praedonum potestatem pervenerint? Cnidum aut Colophonem aut Samum, nobilissimas urbes, innumerabilesque alias captas esse

commemorem, quum vestros portus atque eos portus, quibus vitam ac spiritum ducitis, in praedonum fuisse potestatem sciatis? An vero ignoratis portum Caietae celeberrimum ac plenissimum navium inspectante prætore a praedonibus esse direptum? Ex Miseno autem eius ipsius liberos, qui cum praedonibus antea ibi bellum gesserat, a praedonibus esse sublatos? Nam quid ego Ostiense incommodum atque illam labem atque ignominiam rei publicae querar, quum prope inspectantibus vobis classis ea, cui consul populi Romani praepositus esset, a praedonibus capta atque oppressa est? Pro di immortales! tantamne unius hominis incredibilis ac divina virtus tam brevi tempore lucem adferre rei publicae potuit, ut vos, qui mode ante ostium Tiberinum classem hostium videbatis, nunc nullam intra Oceani ostium praedonum navem esse audiatis? Atque haec qua celeritate gesta sint quamquam videtis, tamen a me in dicendo praetercunda non sunt. Quis enim umquam aut obeundi negocii aut consequendi quaestus studio tam brevi tempore tot loca adire, tantos cursus conficere potuit, quam celeriter Cn. Pompeio duce tanti belli impetus navigavit? qui nondum tempestivo ad navigandum mari Siciliam adiit, Africam exploravit: inde Sardiniam cum classe venit atque haec tria frumentaria subsidia rei publicae firmissimis praesidiis classibusque munivit. Inde quum se in Italiam recepisset, duabus Hispaniis et Gallia Transalpina praesidiis ac navibus confirmata, missis item in oram Illyrici maris et in Achaiam omnemque Graeciam navibus, Italiae duo maria maximis classibus firmissimisque praesidiis adornavit, ipse autem ut Brundisio profectus est, undequinquagesimo die totam ad imperium populi Romani Ciliciam adiunxit: omnes, qui ubique praedones fuerunt, partim capti interfectique sunt, partim unius huius se imperio ac potestati dediderunt. Idem Cretensibus, quum ad eum usque in Pamphyliam legatos deprecatoresque misissent, spem deditionis non ademit obsidesque imperavit. Ita tantum bellum, tam diuturnum, tam longe lateque dispersum, quo bello omnes gentes ac nationes premebantur, Cn. Pompeius extrema hieme apparavit, ineunte vere suscepit, media aestate confecit.

(*a.*) State the circumstances that led to the proposal of the *lex Manilia*, and the powers that it conferred on Pompey.

(*b.*) Describe the positions of the places named above. What does Cicero refer to in the expression "Ostiense incommodum?"

SALLUST—*Catiline*, li.

Omnis homines, Patres conscripti, qui de rebus dubiis consultant, ab odio, amicitia, ira, atque misericordia vacuos esse decet. Haud facile animus verum providet ubi illa officiunt, neque quisquam omnium lubidini simul et usui paruit. Ubi intenderis ingenium, valet, si lubido possidet, ea dominatur, animus nihil valet. Magna mihi copia est memorandi, P. C., quae reges atque populi ira aut misericordia impulsi male consuluerunt, sed ea malo dicere, quae maiores nostri contra lubidinem animi sui recte atque ordine fecere. Bello Macedonico, quod cum rege Perse gessimus, Rhodiorum civitas magna atque magnifica, quae populi Romani opibus creverat, infida et advorsa nobis fuit; sed postquam, bello confecto, de Rhodiis consultum est, maiores nostri, ne quis divitiarum magis quam iniuriae caussa bellum inceptum diceret, impunitos eos dimisere.

Give some account of the war referred to, and the general who concluded it.

LIVY, i., 37.

Hac parte copiarum aucta, iterum cum Sabinis confligitur. Sed praeterquam quod viribus creverat Romanus exercitus, ex occulto etiam additur dolus, missis qui magnam vim lignorum in Anienis ripa iacentem ardentem in flumen conicerent; ventoque iuvante accensa ligna, et pleraque in ratibus impacta subliciis cum haererent, pontem incendunt. Ea quoque res in pugna terrorem attulit Sabinis, effusis eadem fugam impedit; multique mortales, cum hostem effugissent, in flumine ipso periere; quorum fluitantia arma ad urbem cognita in Tiberi prius paene quam nuntiari posset, insignem victoriam fecere. Eo proelio praecipua equitum gloria fuit: utrimque ab cornibus positos, cum iam pelleretur media peditum suorum acies, ita incurrisse ab lateribus ferunt, ut non sisterent modo Sabinas legiones ferociter instantes cedentibus, sed subito in fugam averterent. Montes effuso cursu Sabini petebant, et pauci tenuere; maxima pars, ut ante dictum est, ab equitibus in flumen acti sunt. Tarquinius instandum perterritis ratus, praeda captivisque Roman missis, spoliis hostium—id votum

Appendix, No. 2.

Scholarship Examinations.

Vulcano erat—ingenti cumulo accensis, pergit porro in agrum Sabinum exercitum inducere; et quamquam male gesta res erat, nec gesturos melius sperare poterant, tamen, quia consulendi res non dabat spatium, iere obviam Sabini tumultuario milite; iterumque ibi fusi perditis iam prope rebus pacem petiere.

(*a.*) Give the principal parts of the verbs from which the following participles are formed:—*aucta, impacta, fusis, accensis, ratus*, and those of the verbs *confligitur, haererent, attulit, pergit, pelleretur, petebant, sisterent.*

(*b.*) Give the nominative and genitive singular of the nouns *viribus, subliciis, equitum, cornibus, acies, lateribus.*

(*c.*) Explain the constructions, "iterum cum Sabinis confligitur," "effusis, eadem fugam expedit," "Tarquinius instandum perterritis ratus," and the derivations of the words, *lignum, acies, exercitus, ingens.*

Literary Scholarship of the Second Year.

English.—*Examiner, Professor Moffett,* LL.D.

1. What evidence is adduced by Wiseman to confirm the Scriptural account of the origin of diversity of languages?
2. How does he show that the subjects treated of in the Semitic and Indo-European languages correspond to the peculiar characteristics of those languages? What is the connecting link between those languages?
3. What effect has the want of civilization on the number of languages?
4. Enumerate the seven branches of the Aryan family.
5. Prove that the Celtic is a branch of this family.
6. Enumerate the seven members of the Romance group.
7. State, in the order of their importance, the sources from which the constituents of the English vocabulary are derived: name the *classes* of words which they have respectively contributed; and connect your answer with facts and dates in the history of the British Islands.
8. State the comparative advantages of an Analytic and a Synthetic language.
9. Give an account of the life and the literary labours of Bede.
10. What is the Ormulum? In what metre is it composed? To what stage of the language does it belong? And what peculiarity of spelling does it exhibit?
11. State the source of Shakespeare's Tragedy of Macbeth. How may its date be pretty nearly fixed?
12. Explain the following words and phrases found in Macbeth, and quote the context in which they occur:—Weird, quell, hermits, dudgeon, convinces, limbeck, sightless, fantastical; borne in hand; though in your state of honour I am perfect.

Literary Scholarships of the First Year.

History.—*Examiner, Professor Moffett,* LL.D.

1. Write a brief sketch, with dates, of the career and character of Alexander the Great.
2. Sketch the ancient divisions of the Peloponnesus; and name the principal towns.
3. Macaulay, in his enumeration of the allies of Porsena, speaks of some of them as coming—

> "From where the Witch's Fortress
> O'erhangs the dark blue seas;
> From the still glassy lake that sleeps
> Beneath Aricia's trees—
> Those trees in whose dim shadow
> The ghastly priest doth reign,
> The priest who slew the slayer,
> And shall himself be slain."

Explain fully the allusions.

4. Sketch the ancient divisions of Italy; and name the principal towns.

5. Give the dates of the battles of Marathon, Thermopylae, the Metaurus, Pharsalia, Philippi, and Actium.

6. Give the names of the most northern and most southern points of Great Britain; and state the latitude of each.

7. Give the names of the most northern and most southern points of Ireland, and state the latitude of each.

8. Where is the shortest distance between Ireland and Scotland?

9. Trace the courses of the following rivers; and name the principal places on their banks:—Danube, Seine, Shannon.

Science Scholarships of the Second Year.

Mathematics.—*Examiner, Professor Allman*, LL.D.

1. If a transversal cut the sides of a triangle, prove that the segments of any side are in a ratio compounded of the ratios of the segments of the other sides.

2. If $a \sin\phi + b \cos\phi = c$, prove that

$$\phi = \sin^{-1}\left(\frac{c}{a}\cos\theta\right) - \theta, \text{ where } \theta = \tan^{-1}\left(\frac{b}{a}\right).$$

3. In a plane triangle prove the formula

$$a \cot A + b \cot B + c \cot C = 2(R + r),$$

where R and r are the radii of the circumscribed and inscribed circles.

4. Draw a straight line perpendicular to a given plane from a given point without it.

5. Define the two *poles* of any circle of a sphere, great or small, and show that

(*a*). All chords of the sphere connecting either pole with the circumference of the circle are equal.

(*b*). Every great circle passing through the poles of another great circle is at right angles to it.

6. In a spherical right-angled triangle prove the formulæ

$$\cos A = \cot c \tan b = \cos a \sin B.$$

7. Find the tangent of the angle between two lines whose equations with regard to rectangular co-ordinates are given.

8. Find the equation of the circle which passes through the origin and intercepts lengths m and n, respectively, from the positive parts of the axes of x and y.

9. If $\alpha = 0$, $\beta = 0$, $\gamma = 0$, be the equations of the sides of a triangle; find the equations of the bisectors of the sides, and prove that they intersect in the same point.

10. Give Cardan's solution of a cubic equation.

11. Solve the following equations:

$$x^6 - 1 = 0; \; x^3 - 7x^2 + 16x - 12 = 0, \text{ which has two roots equal.}$$

12. Show that a determinant is not altered if there be added to each constituent of any row or column the corresponding constituents of any of the other rows or columns multiplied respectively by constant factors.

$$\text{Prove that } \begin{vmatrix} x-a, & y-b \\ x_1-a, & y_1-b \end{vmatrix} = \begin{vmatrix} 1, & a, & b \\ 1, & x, & y \\ 1, & x_1, & y_1 \end{vmatrix}.$$

Professor Allman, LL.D.

1. Three straight lines pass through a fixed point within a sphere and are perpendicular to each other; prove that the sum of the squares of the chords intercepted on them by the sphere is constant.

2. Prove that $\tan n\theta = \dfrac{\sin\theta + \sin 3\theta + \ldots . n \text{ terms}}{\cos\theta + \cos 3\theta + \ldots . n \text{ terms}}$.

Appendix, No. 2.

Scholarship Examinations.

3. In a spherical triangle prove the formula

$$2 \cot A \sin a = \tan\frac{B}{2} \sin (c+a) + \cot\frac{B}{2} \sin (c-a).$$

4. Given the base of a triangle, find the locus of the vertex, if the intercept on a given line is constant.

5. Find the equation to a circle which touches the two lines

$\frac{x}{a}+\frac{y}{b}=\lambda$, $\frac{x}{a}+\frac{y}{b}=\mu$, and whose centre lies on the line $ax=by$.

6. Find the equation of the circle circumscribing the triangle formed by the lines $\alpha=0$, $\beta=0$, $\gamma=0$.

7. The biquadratic equation $x^4-p\,x^3+q\,x^2-r\,x+s=0$ has two roots equal with opposite signs; construct the quadratic which gives the remaining roots.

8. Prove that $\begin{vmatrix} (b+c)^2, & a^2, & a^2 \\ b^2, & (c+a)^2, & b^2 \\ c^2, & c^2, & (a+b)^2 \end{vmatrix} = 2\,abc(a+b+c)^3$.

Prizes at Entrance.

Geometry.—*Examiner, Professor Allman,* LL.D.

1. Bisect a triangle by a straight line drawn from a given point in one of its sides.

2. Given the perimeter and angles of a triangle; construct it.

3. Describe a circle touching a given circle, and a given straight line at a given point.

4. Calculate the area of a regular decagon inscribed in a circle whose radius is r.

5. If in any circle the side of an inscribed regular hexagon be produced till it becomes equal to the side of an inscribed square, prove that the tangent drawn from the extremity, without the circle, is equal to the side of the inscribed regular octagon.

6. Given the vertical angle of a triangle in magnitude and position, and the sum of the reciprocals of the sides: prove that the base always passes through a fixed point on the bisector of the vertical angle.

7. A circle is described round an equilateral triangle, and from any point in the circumference straight lines are drawn to the vertices of the triangle; prove that one of these lines is equal to the sum of the other two.

8. Construct a triangle, being given the base, the difference of the base angles, and that the locus of the vertex is a straight line.

9. Given the vertical angle and the sum of the sides of a triangle; find the locus of the point in which the base is cut in a given ratio.

10. Given a triangle; find the locus of a point so that the sum of the squares of the distances from it to the base angles shall be equal to the square of its distance to the vertex.

Science Scholarships—First Year.

Arithmetic.—*Examiner, Professor Allman,* LL.D.

1. If the numerator and denominator of a fraction be both multiplied by the same number, the value of the fraction will not be altered. How is the value of a fraction altered by the addition of equal numbers to the numerator and denominator?

2. In what sense is a vulgar fraction said to be the value of a circulating decimal? Explain how a sufficient degree of accuracy may be obtained in the addition and subtraction of circulating decimals to any given number of decimal places without converting the decimals into equivalent vulgar fractions. Find the sum of 437·987′ and 7035·4·96′ as far as six places of decimals.

3. Write down the table of time. How do you determine whether any particular year is a leap year?

4. If 1lb. avoirdupois be equivalent to 7000 grains troy, and 1869 sovereigns weigh 40 lbs. troy, how many sovereigns will weigh 1 avoirdupois ounce?

5. A tradesman marks his goods with two prices, one for ready money and the other for one year's credit, allowing discount at 5 per cent. If the credit price be marked at £2 9*s.*, what ought to be the cash price?

6. Extract the square roots of 43046721, and of ·000961.

7. If 100 oz. of gold be worth 1428 oz. of silver, and 6 oz. of silver be worth 1 oz. of platinum, and 3 oz. of platinum be worth 1330 oz. of copper, calculate the weight of copper which is worth $2\frac{1}{4}$ lbs. of gold, troy.

8. Find to the nearest hour the value of $\frac{S}{\frac{3}{4}m^2(1-\frac{3}{8}m)}$, where S=27 days, 7 hours, 43 minutes, and m=·0748.

MATHEMATICS.—*Examiner, Professor Allman,* LL.D.

1. Solve the equations:—

$$\left(\frac{x}{x-1}\right)^2+\left(\frac{x}{x+1}\right)^2=n(n-1)\,;\quad \frac{x}{x+4}+\frac{4}{\sqrt{(x+4)}}=\frac{21}{x}.$$

2. If $2m=x+\frac{1}{x}$ and $2n=y+\frac{1}{y}$, express $mn+\sqrt{\{(m^2-1)\,(n^2-1)\}}$ in terms of x and y.

Show that $(a-b)^2+(b-c)^2+(c-a)^2=2\{(a-b)\,(a-c)+(b-a)\,(b-c)+(c-a)\,(c-b)\}$.

3. Solve the simultaneous equations:—

$$x^2+xy=84,\ xy-y^2=10.$$

4. Show that the square of the arithmetic mean of two quantities is equal to the arithmetic mean of the arithmetic and geometric means of the squares of the same two quantities.

5. Divide a given straight line into two parts, so that the rectangle contained by the whole and one of the parts may be equal to the square on the other part.

If the whole line be the linear unit, calculate the length of the greater segment.

6. Prove that similar triangles are to each other in the duplicate ratio of their homologous sides.

7. Prove that the feet of the perpendiculars from the angles of a triangle on the opposite sides and the points of bisection of the sides all lie on the circumference of the same circle.

8. Find the locus of points from which tangents drawn to two given circles shall contain equal angles.

9. Find the cosine of an angle of a triangle in terms of the sides.

Squares are described on the sides of a triangle, and the adjacent corners connected. Prove that the sum of the squares of the three connecting lines is three times the sum of the squares of the sides of the triangle.

10. Show that $\sin\alpha\sin\beta\sin(\beta-\alpha)+\sin\beta\sin\gamma\sin(\gamma-\beta)+\sin\gamma\sin\alpha\sin(\alpha-\gamma)+\sin(\beta-\alpha)\sin(\gamma-\beta)\sin(\alpha-\gamma)=0$.

11. If a, b, and B be given, show under what circumstances there will be two triangles satisfying the conditions of the problem.

Prove that the circles circumscribing both triangles are equal in magnitude, and that the distance between their centres is $\sqrt{b^2\mathrm{cosec}^2\mathrm{B}-a^2}$.

12. Prove that $\frac{\sin A+\sin 3A+\sin 5A}{\cos A+\cos 3A+\cos 5A}=\tan 3A$.

ENGINEERING SCHOLARSHIP—THIRD YEAR.

Examiner, Professor Allman, LL.D.

1. Prove that conic sections have in general one, and only one centre.

2. Interpret the equation $\left(\frac{x}{a}+\frac{y}{b}-1\right)\left(\frac{x}{a'}+\frac{y}{b'}-1\right)+\mu xy=0$; how many parabolas can be described through four given points?

3. Trisect a given arc of a circle.

Appendix, No. 2.

Scholarship Examinations.

4. Find the differential co-efficients of

$$\frac{\sqrt{(a+x)}}{\sqrt{a}+\sqrt{x}}\ ;\ \sin^{-1}\frac{b+a\cos x}{a+b\cos x};\ \log\frac{\sqrt{(x^2+a^2)}+\sqrt{(x^2+b^2)}}{\sqrt{(x^2+a^2)}-\sqrt{(x^2+b^2)}}.$$

5. Expand $\log(1+e^x)$ in powers of x.

6. Transform $\frac{d^2y}{dx^2}+\frac{1}{x}\frac{dy}{dx}+y=o$, into an equation in which t is the independent variable where $x^2=4t$.

7. In the curve $x^2(x+y)=a^2(x-y)$, find the equation to the tangent at the origin.

8. Find $\int\frac{dx}{\sqrt{(x^2-a^2)}}$; $\int\frac{dx}{\cos x}$; $\int\frac{dx}{x^2\sqrt{(1+x^2)}}$.

9. Investigate the formula of reduction for $\int\frac{dx}{x^n\sqrt{(a^2-x^2)}}$.

10. For what values of m and n are the curves $a^my^n=x^{m+n}$ rectifiable?

EXPERIMENTAL PHYSICS.—*Examiner, Professor Curtis,* LL.D.

1. How would you determine how many strokes of the piston are necessary to cause water to issue from the spout of a pump of given dimensions?

2. Establish the formula connecting the heights of the mercury in the two branches of a Mariotte's tube.

3. Describe the several methods which have been employed for determining the temperature of water at its maximum density.

4. Having found the apparent specific gravity of a solid, when both it and the water employed in the process are at a uniform temperature different from the standard one, how would you correct the result, so as to obtain the true specific gravity?

5. Give the laws respecting the latent and sensible heat of steam at different pressures proposed by Watt, by Southern, and Creighton, and by Regnault, respectively.

6. Account for the residual charge on a Leyden jar, and give Kohlrausch's law respecting it.

7. If a bar of steel were such that both extremities attracted the same pole of a magnetic needle, and repelled the other, what would you infer respecting its magnetic state?

8. In adjusting Gauss' bifilar magnetometer it is *desirable* that the coefficient of the moment of magnetism, and the coefficient of the moment of torsion should be *nearly equal*, and *necessary* that the latter should be the greater; assign the reason for each of these conditions, and prove what you assert.

MIXED MATHEMATICS.—*Examiner, Professor Curtis,* LL.D.

1. The arms of a balance are in the ratio of 19 to 20, the pan in which the weights are placed is suspended from the longer arm: find the real weight of a body which apparently weighs 38lbs.

2. On a wheel and axle a power of 7 lbs. balances 1 cwt., and in one revolution of the wheel the point of application of the power moves through 32 inches: find through what height the weight is raised.

3. A body is just kept by friction from sliding down a rough inclined plane at an angle of 30° to the horizon; find the pressure at right angles to the plane, and the force necessary to draw the body up the plane.

4. A body is projected from the top of a tower whose height is h with the velocity which would be acquired in falling down from rest through n times the height of the tower; show that the greatest possible range on the horizontal

plane passing through the base of the tower $= 2h\sqrt{n^2+n}$, and that the tangent of the corresponding angle of projection is $\sqrt{\frac{n}{n+1}}$.

5. Two bodies connected by a stretched string, which passes over a smooth pulley at the top of two inclined planes placed back to back, move each along one of the planes under the action of gravity, m_1, m_2 being the masses of the two bodies, and α_1, α_2 the angles of inclination of the planes to the horizon, investigate the expression for the tension on the string.

6. A homogeneous body of specific gravity s is formed by erecting on the base of a hemisphere of radius r a right cone whose semiangle is α, if l be the specific gravity of a liquid in which this solid is placed in equilibrium with the conical vertex downwards, prove that a portion of the hemisphere will be immersed if $\tan \alpha > \frac{l-s}{2s}$

7. One of the parallel sides of a trapezium, a, is in the surface of a liquid in which the side b is sunk to a depth h; show that x, the distance of the centre of pressure of the trapezium from the side a is given by the equation—

$$x = \frac{a \quad 3b}{2(a+2b)} h.$$

8. The radii of each of the bounding surfaces of a double convex lens of amber (refractive index=1·547) is 6 inches; find the radius of each of the bounding surfaces of the equivalent double convex lens of diamond (refractive index=2·439).

9. A ray of light is incident nearly perpendicular upon a thin prism of diamond (refractive index=2·439, and dispersive power=·038) the angle of which is 3°; find the deviation and dispersion produced.

10. Show that the problem, to find the latitude of a place from the observed altitudes of two known stars, and the time between the observations, is reducible to the following problem of spherical trigonometry—given the four sides of a spherical quadrilateral, and one angle to construct it.

Fourth Year Scholarship Examination.

Surgery.—*Examiner, Professor J. V. Browne,* M.D.

1. Describe the operation of resection of the elbow-joint, and the cases of injury and disease for which it is appropriate.

2. (*a.*) What are the several kinds of dislocation to which the elbow-joint is subject?

(*b.*) Describe the mode of reduction and after treatment of each.

3. How would you treat a compound dislocation of the ankle-joint?

4. Describe the principal forms of fracture of the patella and the modes of treatment.

5. What may be the consequence of a traumatic rupture of the urethra, and what plan of treatment would you adopt?

6. What are the several causes of retention of urine; name the treatment to be adapted to each cause.

Chemistry.—*Examiner, Professor Romney,* PH.D.

1. What is meant by capillary attraction?
2. Mention the principal constituents of coal gas.
3. Give the composition and properties of the atmosphere.
4. Describe the method of preparing and the properties of chlorine gas.

Appendix, No. 2.

Scholarship Examinations.

5. Give the laws of combination by weight and volume.
6. When are bodies said to be isomorphous.
7. What is meant by rational and empirical formulæ?
8. Describe the method of obtaining the metal aluminium.
9. What is meant by catalysis?
10. What compounds are obtained when sulphuric acid acts upon metallic mercury?
11. How is acetic acid obtained?
12. Give the composition and properties of starch.

MEDICINE.—*Examiner, Professor Colahan,* M.D.

1. Give an outline of the main features of delirium tremens, and its pathology.
2. State the cerebral disordered conditions with which it is likely to be confounded.
3. Give the treatment of the disease in accordance with the practical divisions of the disease.
4. Give the diagnosis respectively of apoplexy from extravasation of blood, and from effusion of serum, and give the treatment that should be adopted in each form of the disease.
5. State the symptoms and diagnosis of convulsions of brain, origin, and from sympathy with diseases of other organs.
6. State fully the treatment from these several causes.

FOURTH YEAR'S SCHOLARSHIPS.

CHEMISTRY.—*Examiner, Professor M'Coy,* F.R.C.S.I.

1. By what general properties are the alkaloids distinguished as a class? By what are they all precipitated from their solutions, and act as an antidote to their poisonous action? What advantages are obtained from this form of medicine in practice? Give an instance where two or more alkaloids are found in the same plant.
2. How is creosote obtained? What are its best solvents? By what agent are its ordinary adulterations recognized and separated? What are its medical uses? What are its proportions in the mixture creosote in the Br. Ph.?
3. From what part of the plant is the tinctura colchisi obtained, and from what part the extract? Which of these preparations do you consider more certain in practical effect, and on what grounds? What the medical uses?

MEDICAL JURISPRUDENCE.—*Examiner, Professor M'Coy,* F.R.C.S.I.

1. A woman pleads pregnancy to stay execution for a capital offence; describe accurately the medical means to justify the plea, a month after impregnation?
2. In a case of imputed poisoning, you have got the sulphide of arsenic in the usual way; how might you discover antimony, and its quantity, among it? How much arsenious acid will be equivalent to 10 grains of its sulphide?
3. How would you recognise aconite chemically and otherwise?
4. How long might a man live after his bladder was ruptured by a kick, and what physical exertion might he be capable of in the interim?

Sessional Examination, 1867.

Latin.—*Examiner, Professor Bagley,* M.A.

SECOND YEAR'S STUDENTS.

Translate:—

Cicero—*De Officiis*, ii., 7 & 8.

Omnium autem rerum nec aptius est quidquam ad opes tuendas ac tenendas quam diligi, nec alienius quam timeri. Praeclare enim Ennius.

Quem metuunt oderunt: quem quisque odit periisse expetit.

Multorum autem odiis nullas opes posse obsistere, si antea fuit ignotum, nuper est cognitum. Nec vero huius tyranni solum, quem armis oppressa pertulit civitas paretque quum maxime mortuo, interitus declarat quantum odium hominum valeat ad pestem, sed reliquorum similes exitus tyrannorum, quorum haud fere quisquam interitum talem effugit. Malus enim est custos diuturnitatis metus, contraque benevolentia fidelis vel ad perpetuitatem. Sed iis, qui vi oppressos imperio coërcent, sit sane adhibenda saevitia, ut heris in famulos, si aliter teneri non possunt: qui vero in libera civitate ita se instruunt, ut metuantur, iis nihil potest esse dementius. Quamvis enim sint demersae leges alicuius opibus, quamvis timefacta libertas, emergunt tamen haec aliquando aut iudiciis tacitis aut occultis de honore suffragiis. Acriores autem morsus sunt intermissae libertatis quam retentae. Quod igitur latissime patet neque ad incolumitatem solum, sed etiam ad opes et potentiam valet plurimum, id amplectamur, ut metus absit, caritas retineatur. Ita facillime quae volemus et privatis in rebus et in re publica consequemur. Etenim qui se metui volent, a quibus metuentur, eosdem metuant ipsi necesse est. Quid enim censemus superiorem illum Dionysium, quo cruciatu timoris angi solitum? qui cultros metuens tonsorios candente carbone sibi adurebat capillum? quid Alexandrum Pheraeum, quo animo vixisse arbitramur? qui, ut scriptum legimus, quum uxorem Thebe admodum diligeret, tamen ad eam ex epulis in cubiculum veniens barbarum et eum quidem, ut scriptum est, compunctum notis Thraeciis destricto gladio iubebat anteire praemittebatque de stipatoribus suis qui scrutarentur arculas muliebres et ne quod in vestimentis telum occultaretur exquirerent. O miserum, qui fideliorem et barbarum et stigmatiam putaret quam coniugem! Nec eum se fefellit. Ab ea est enim ipsa propter pellicatus suspicionem interfectus. Nec vero ulla vis imperii tanta est, quae premente metu possit esse diuturna. Testis est Phalaris, cuius est praeter caeteros nobilitata crudelitas, qui non ex insidiis interiit, ut is, quem modo dixi, Alexander, non a paucis, ut hic noster, sed in quem universa Agrigentinorum multitudo impetum fecit. Quid? Macedones nonne Demetrium reliquerunt universique se ad Pyrrhum contulerunt? Quid? Lacedaemonios iniuste imperantes nonne repente omnes fere socii deseruerunt spectatoresque se otiosos praebuerunt Leuctricae calamitatis? Externa libentius in tali re quam domestica recordor. Verum tamen quam diu imperium populi Romani beneficiis tenebatur, non iniuriis, bella aut pro sociis aut de imperio gerebantur, exitus erant bellorum aut mites aut necessarii, regum, populorum, nationum portus erat et refugium senatus, nostri autem magistratus imperatoresque ex hac una re maximam laudem capere studebant, si provincias, si socios aequitate et fide defendissent. Itaque illud patrocinium orbis terrae verius quam imperium poterat nominari. Sensim hanc consuetudinem et disciplinam iam antea minuebamus, post vero Sullae victoriam penitus amisimus: desitum est enim videri quidquam in socios iniquum, quum exstitisset in cives tanta crudelitas. Ergo in illo secuta est honestam causam non honesta victoria. Est enim ausus dicere hasta posita, quum bona in foro venderet et bonorum virorum et locupletum et certe civium, 'praedam se suam vendere.' Secutus est qui in causa impia, victoria etiam foediore non singulorum civium bona publicaret, sed universas provincias regionesque uno calamitatis iure comprehenderet. Itaque vexatis ac perditis exteris nationibus ad exemplum amissi imperii portari in triumpho Massiliam vidimus et ex ea urbe triumphari, sine qua numquam nostri imperatores ex Transalpinis bellis triumpharunt. Multa praeterea commemorarem nefaria in socios, si hoc uno quidquam sol vidisset indignius. Iure igitur plectimur. Nisi enim multorum impunita scelera tulissemus, numquam ad unum tanta pervenisset licentia: a quo quidem rei familiaris ad paucos, cupiditatum ad multos improbos

Appendix, No. 2.

Sessional Examinations.

venit hereditas. Nec vero umquam bellorum civilium semen et causa deerit, dum homines perditi hastam illam cruentam et meminerint et sperabunt, quam P. Sulla quum vibrasset dictatore propinquo suo, idem sexto tricesimo anno post a sceleratiore hasta non recessit, alter autem, qui in illa dictatura scriba fuerat, in hac fuit quaestor urbanus. Ex quo debet intelligi talibus praemiis propositis numquam defutura bella civilia. Itaque parietes modo urbis stant et manent, iique ipsi iam extrema scelera metuentes, rem vero publicam penitus amisimus. Atque in has clades incidimus—redeundum est enim ad propositum,—dum metui quam cari esse et diligi malumus. Quae si populo Romano iniuste imperanti accidere potuerunt, quid debent putare singuli? Quod quum perspicuum sit benevolentiae vim esse magnam metus imbecillam, sequitur ut disseramus quibus rebus facillime possimus eam quam volumus adipisci cum honore et fide caritatem. Sed ea non pariter omnes egemus. Nam ad cuiusque vitam institutam accommodandum est a multisne opus sit an satis sit a paucis diligi. Certum igitur hoc sit idque et primum et maxime necessarium, familiaritates habere fidas amantium nos amicorum et nostra mirantium: haec enim est una res prorsus, ut non multum differat inter summos et mediocres viros, eaque utrisque est propemodum comparanda. Honore et gloria et benevolentia civium fortasse non aeque omnes egent, sed tamen, si cui haec suppetunt, adiuvant aliquantum quum ad caetera, tum ad amicitias comparandas.

Translate into Latin prose:—

Such was the end of Galba, in the seventy-third year of his age. He had seen the reigns of five princes, and enjoyed during that whole period a series of prosperity: happy as a private citizen, as a prince unfortunate. He was descended from a long line of ancestors. His wealth was great; his talents not above mediocrity. Free from vice, he cannot be celebrated for his virtues. He knew the value of fame, yet was neither arrogant nor vain-glorious. Having no rapacity, he was thrifty of his own, and of the public treasure careful almost to avarice. The splendour of his rank, and the good-fortune with which he steered through the dangers of a gloomy and evil period, helped to enhance the value of his character: his indolence passed for wisdom, and inactivity got the name of prudence. In the vigour of his days he served with honour in Germany; and Spain, when he was advanced in years, felt the mildness of his government. While no higher than a private citizen, his merit was thought superior to his rank; and the suffrages of mankind would have pronounced him worthy of empire, had he never made the experiment.

FIRST YEAR STUDENTS.

Translate—

TERENCE—*Hecyra*—Act iii., Sc. 4.

Parmeno, *Socia*, *Pamphilus*.

Par. Ain tu tibi hoc incommodum euenisse iter?
So. Non hercle uerbis, Parmeno, dici potest
Tantum, quam re ipsa nauigare incommodumst.
Par. Itanest? *So.* O fortunate, nescis quid mali
Praeterieris, qui numquam es ingressus mare.
Nam alias ut mittam miserias, unam hanc uide:
Dies triginta aut plus eo in naui fui,
Quom interea semper mortem expectabam miser:
Ita usque aduorsa tempestate usi sumus.
Par. Odiosum. *So.* Haud clam me est: denique hercle aufugerim
Potius quam redeam, si eo mihi redeundum sciam.
Par. Olim quidem te causae inpellebant leues,
Quod nunc minitare facere ut faceres, Sosia.
Sed Pamphilum ipsum uideo stare ante ostium.
Ite intro: ego hunc adibo, siquid me uelit.
Ere, etiam tu hic stas? *Pam.* Equidem te expecto. *Par.* Quid est?
Pam. In arcem transcurso opus est. *Par.* Quoi homini? *Pam.* Tibi.
Par. In arcem? quid eo? *Pam.* Callidemidem hospitem
Myconium, qui mecum una uectust, conueni.

Par. Perii. uouisse hunc dicam, si saluos domum
Redisset umquam, ut me ambulando rumperet.
Pam. Quid cessas? *Par.* Quid uis dicam? an conueniam modo?
Pam. Immo, quod constitui hodie conuenturum eum,
Non posse, ne me frustra illi expectet: uola.
Par. At non noui hominis faciem. *Pam.* At faciam ut noueris:
Magnus, rubicundus, crispus, crassus, caesius,
Cadauerosa facie. *Par.* Di illum perduint.
Quid, si non ueniet? maneamne usque ad uesperum?
Pam. Maneto: curre. *Par.* Non queo: ita defessus sum.
Pam. Ille abiit. quid agam infelix? prorsus nescio
Quo pacto hoc celem, quod me orauit Myrrina,
Suae gnatae partum: nam me miseret mulieris.
Quod potero faciam, tamen ut pietatem colam:
Nam me parenti potius quam amori obsequi
Oportet. attat eccum Phidippum et patrem
Video: horsum pergunt. quid dicam hisce incertus sum.

Translate into Latin prose—

After this Tullus made war upon the Sabines, and gained a victory over them. But now, whether it were that Tullus had neglected the worship of the gods while he had been so busy in his wars, the signs of the wrath of heaven became manifest—a plague broke out among the people, and Tullus himself was at last stricken with a lingering disease. Then he bethought him of good and holy Numa, and how in his time the gods had been so gracious to Rome, and had made known their will by signs whenever Numa inquired of them. So Tullus also tried to inquire of Jupiter; but the god was angry, and sent his lightnings, and Tullus and all his house were burnt to ashes. This made the Romans know that they wanted a king who would follow the example of Numa; so they chose his daughter's son, Ancus Marcius, to reign over them in the room of Tullus.

Translate—

TACITUS.—*Annals* I.

17. Cur paucis centurionibus, paucioribus tribunis in modum servorum obedirent? Quando ausuros exposcere remedia, nisi novum et nutantem adhuc principem precibus vel armis adirent? satis per tot annos ignavia peccatum, quod tricena aut quadragena stipendia senes, et plerique truncato ex vulneribus corpore, tolerent. Ne dimissis quidem finem esse militiae, sed apud vexillum tendentes alio vocabulo eosdem labores perferre. Ac si quis tot casus vita superaverit, trahi adhuc diversas in terras, ubi per nomen agrorum uliginesque paludum vel inculta montium accipiant. Enimvero militiam ipsam gravem, infructuosam: denis in diem assibus animam et corpus aestimari: hinc vestem, arma, tentoria, hinc saevitiam centurionum et vacationes munerum redimi. At hercule verbera et vulnera, duram hiemem, exercitas aestates, bellum atrox aut sterilem pacem sempiterna. Nec aliud levamentum quam si certis sub legibus militia iniretur, ut singulos denarios mererent, sextus decumus stipendii annus finem adferret; ne ultra sub vexillis tenerentur, sed isdem in castris praemium pecunia solveretur. An praetorias cohortes, quae binos denarios acceperint, quae post sedecim annos penatibus suis reddantur, plus periculorum suscipere? Non obtrectari a se urbanas excubias: sibi tamen apud horridas gentes e contuburniis hostem aspici.

47. Inmotum adversus eos sermones fixumque Tiberio fuit non omittere caput rerum neque se remque publicam in casum dare. Multa quippe et diversa angebant: validior per Germaniam exercitus, propior apud Pannoniam; ille Galliarum opibus subnixus, hic Italiae inminens: quos igitur anteferret? ac ne postpositi contumelia incenderentur. At per filios pariter adiri, maiestate salva, cui maior e longinquo reverentia. Simul adulescentibus excusatum quaedam ad patrem referre, resistentisque Germanico aut Druso posse a se mitigari vel infringi: quod aliud subsidium, si imperatorem sprevissent? Ceterum ut iam iamque iturus legit comites, conquisivit impedimenta, adornavit naves: mox hiemem aut negotia varie causatus primo prudentes, dein vulgum, diutissime provincias fefellit.

Appendix, No. 2.

Sessional Examinations.

Annals II.

36. Et certamen Gallo adversus Caesarem exortum est. Nam censuit in quinquennium magistratuum comitia habenda, utque legionum legati, qui ante praeturam ea militia fungebantur, iam tum praetores destinarentur, princeps duodecim candidatos in annos singulos nominaret. Haud dubium erat eam sententiam altius penetrare et arcana imperii temptari. Tiberius tamen, quasi augeretur potestas eius, disseruit: grave moderationi suae tot eligere, tot differre. Vix per singulos annos offensiones vitari, quamvis repulsam propinqua spes soletur: quantum odii fore ab iis qui ultra quinquennium proiciantur. Unde prospici posse quae cuique tam longo temporis spatio mens, domus fortuna? superbire homines etiam annua designatione: quid si honorem per quinquennium agitent? Quinquiplicari prorsus magistratus, subverti leges, quae sua spatia exercendae candidatorum industriae quaer endisque aut potiundis honoribus statuerint.

Annals III.

27. Pulso Tarquinio adversum patrum factiones multa populus paravit tuendae libertatis, et firmandae concordiae; creatique decemviri, et accitis quae usquam egregia, compositae duodecim tabulae finis aequi iuris. Nam secutae leges, etsi aliquando in maleficos ex delicto, saepius tamen dissensione ordinum et apiscendi inlicitos honores, aut pellendi claros viros, aliaque ob prava, per vim latae sunt. Hinc Gracchi et Saturnini turbatores plebis, nec minor largitor nomine senatus Drusus; corrupti spe aut inlusi per intercessionem socii. Ac ne bello quidem Italico, mox civili omissum quin multa et diversa sciscerentur, donec L. Sulla dictator abolitis vel conversis prioribus, cum plura addidisset, otium eius rei haud in longum paravit, statim turbidis Lepidi rogationibus, neque multo post tribunis reddita licentia, quoquo vellent, populum agitandi. Iamque non modo in commune sed in singulos homines latae quaestiones, et corruptissima re publica plurimae leges.

MODERN HISTORY.—*Examiner, Professor Moffett,* LL.D.

1. "Our National History," says an English historian, "dates from the Treaty of Wedmor." Give the date and the substance of this Treaty.

2. Macaulay describes in graphic language the widely-extended field of Norman adventure and conquest in the eleventh and twelfth centuries, and that of English military achievement in the fourteenth: give a summary of the Historian's narrative.

3. Enumerate in order the Kings of France from 1100 to 1500 A.D., giving the relationship of each to the predecessor through whom he claimed.

4. At what dates, and between whom, were the following Treaties concluded:—Valognes, Brétigni, Troyes, Arras, Pecquigni, Estaples?

5. Give the dates of the following battles (which are not set down here in chronological order).

Stoke, Brenneville, Bouvines, Morat, Beaujé, Courtrai, "Journée des Harengs," Athenry, Rosebecque, Salamanca, Saratoga, Dettingen.

6. Give, with dates, four of the most important Statutes entitled of Edward I.

7. Explain precisely the claim of Edward III. to the crown of France.

8. Draw a pedigree of the descendants of Lionel Duke of Clarence and Edmund of Langley; and state briefly what you know of those who came to untimely deaths.

9. Who was the legitimate heir to the Crown on the deposition of Richard II.? What combination of claims did Henry IV. put forward? Trace his descent from Henry III. both by Father and Mother.

10. A great legal authority writes thus of Richard III.'s Parliament:—"We have no difficulty in pronouncing it the most meritorious national council for protecting the liberty of the subject and putting down abuses in the administration of justice, which had sat since the time of Edward I." What are the enactments alluded to?

11. Give an account of Perkin Warbeck.

12. Give an account, with dates, of

a. The Triple Alliance (of the 17th century).
b. The War of the Right of Devolution.
c. The Barrier Treaty.
d. The Quadruple Alliance (of the 18th century).

13. State the principal arguments for, and against, the Treaty of Utrecht.

14. "The House of Brunswick no more came in by a clear title than that of Stuart." How does Hallam prove the defect of title in each case?

15. What was the purpose of the Peerage Bill proposed in the reign of George I.?

16. What is the Statutable provision by which the independence of the Judges is secured?

17. What was the earliest occasion of what is now known as the Stock Jobbing Mania? What instances have occurred since the Revolution of men in eminent public stations being convicted of corruption?

18. Give an account of the origin of the National Debt; and state its amount at each of the following periods:—1720, 1763, 1783, 1802, 1815.

19. Give the succession of English Administrations from the accession of George II. to that of George IV.

20. State briefly the circumstances in which the first administration of the younger Pitt commenced; and those in which it terminated.

21. What was the question of the Regency in 1789? How did the Irish Legislature act on this occasion?

22. What events make the following years memorable in the history of Ireland:—1014, 1295, 1318, 1367, 1495, 1719, 1724, 1745, 1768, 1782?

23. Explain the terms *gavelkind*, *coshering*, and *bonaght*.

24. Name the authors of the following works, and state the subject of each:—Macariae Excidium, Occana, The Conduct of the Allies, The Crisis, Taxation no Tyranny, Mémoire Justificatif, Vindiciae Gallicae, Peter Plymley's Letters.

ENGLISH LITERATURE.—*Examiner, Professor Moffett*, LL.D.

1. Classify the languages derived from the Latin; and mention any important facts relating to their formation, and the history of their earliest literature.

2. State the comparative advantages (for the purposes of expression) of the Analytic and Synthetic forms of Language; and examine the following statement:—"The earlier the stage of a Language is, the greater the amount of its inflexional forms."

3. In some of the compositions in verse before Chaucer's time we have Rhyme, in others Alliteration, in others both, and in one piece neither; name the poems.

4. State what you know of the history of English Blank Verse. Name four other kinds of verse that have been largely used in English Poetry; and mention an important poem written in each kind.

5. Who are the principal personages in the several books of the Fairy Queen, and what moral virtues do they respectively represent? Under what name is Ireland referred to?

6. Name in chronological order six British Historical writers; and mention the subject of the writings of each.

7. Enumerate, with dates, those writings of Dryden that have relation to the political and religious controversies of his time.

8. Give the substance of Dr. Johnson's celebrated comparison of Dryden and Pope.

9. Sketch the history of English Poetical Literature during the 18th century.

10. Name in chronological order the Prose works of Swift: state the purpose or plan of each, and characterize his style.

11. In what works, of what authors, and of what periods, are the following extracts found?—

a. "Westward the course of empire holds its way."
b. "When I beheld the Poet blind, yet bold."
c. "Love had he found in huts where poor men lie."
d. "Earth hath not anything to show more fair."
e. "A thing of beauty is a joy for ever."
f. "And coming events cast their shadows before."
g. "Of Law there can be no less acknowledged than that her seat is the bosom of God, her voice the harmony of the world."
h. "Words are the Counters of wise men, and the Money of fools."

Appendix, No. 2.

Sessional Examinations.

i. "*Nitor in adversum* is the motto for a man like me."
j. "Studies serve for delight, for ornament, and for ability."
k. "Methinks I see in my mind a noble and puissant nation rousing herself like a strong man after sleep."
l. "But the age of chivalry is gone."

Chaucer and Shakespeare.

I. Quote any ten continuous lines that you may recollect from Chaucer and from Shakespeare; and remark upon whatever they may present notable either in a philological or an esthetical point of view:

II. Explain the following italicized words and phrases:—

a. "*For him was lever han* at his beddes head"
b. "Her greatest *oathe n'as* but by *St. Loi*."
c. "*Us thought* it was not worth *to make it wise*."
d. "His *purchase was well better than his rent*."
e. "*Wo was his coke but if his sauce were*."
f. "But *draweth cutte*, or that we farther *twinne*."
g. ——"*The dram of ill*
Doth all *the noble substance often dout*
To his own scandal."
h. "Being *a good kissing carrion*."
i. "Ah me, what act
That roars so loud, and *thunders in the index*."
j. "Antiquity forgot, custom not known,
The ratifiers and props of every word,
They cry, 'Choose we; Laertes shall be king.'"
k. "They *clepe* us drunkards, and with swinish phrase
Soil our addition."
l. "*Woul't drink up Esil?*"

III. Who was the author of the stanzas that the graver-digger sings?

Logic.—*Examiner, Professor Moffett*, LL.D.

1. What are the essential steps in Generalization? What Laws of Thought appear to be involved in the Abstract Notion? And what in the General?

2. Explain the Predicables. What is meant by assigning to these distinctions a merely *relative* character? Show that the Differences or Properties of any lower Species are Accidents in reference to the Class they come under.

3. Distinguish Essential and Accidental, Nominal and Real, Definitions.

4. Assuming the laws of Contradictory and Subaltern Opposition, prove those of Contrary and Sub-Contrary.

5. Given I as the Major Premise, determine the Modes and Figures.

6. Given a Negative Minor Premise, determine the Modes and Figures.

7. Given O as Major Premise, determine the position of the Middle Term.

8. Given the Middle Term twice Universal, determine the Quantity of the Conclusion, and the Modes and Figures.

9. Prove that the combination OA as Premises is admissible in only one Figure.

10. Discuss in *all* the Figures the legitimacy of EAE, AEE, AAI, and IAI; assigning reasons in every case of exclusion.

11. What renders Reductio ad Impossibile necessary? Hence in what Figures only is it indispensable to resort to it? Reduce in this way Baroko; and show the validity of the process.

12. *All* the Imperfect Modes may be reduced *ostensively*. Reduce in this way Bokardo; and show that the nomenclature proposed is inadequate.

13. Explain the Modes Fapesmo and Frisesmo.

14. State the following arguments in regular Syllogisms:—

(*a.*) "The ravages of the cattle plague proportionately raise the price of the surviving beasts; so that the natural working of the law of price sufficiently compensates the farmers for their loss."

(*b.*) "If the line AB is equal to the line CD, it follows that a line equal to ten times AB will also be equal to ten times CD."

15. State the following argument in strict Syllogistic form—both Conditional and Categorical; and examine its validity by the rules of each:—

"If this world were the last stage of man's existence wickedness would not pass unpunished here; but there is evidence of a future state: affliction, therefore, is not proof of wickedness."

16. All Conditional Syllogisms may be reduced to Barbara. Explain and illustrate the process.

17. Enumerate four species of the Dilemma. State the fundamental principle on which such reasoning rests. In what various ways may it be invalidated?

18. State the "canon" and the "formula" of Analogical reasoning, and the ratios on which its force depends. State in Syllogistic form the reasoning implied in the following passage, and also the counter-argument that might be urged:—"Large colonies are as detrimental to the power of a state as overgrown limbs to the vigour of the human body."

19. Define Probability. State the following argument in strictly logical form: "A is probably B; B is probably C: A, therefore, is probably C"; and estimate its force. How do you estimate the *cumulative* force of several probable arguments?

20. Determine the number—both the minimum and the maximum—of Syllogisms into which a Sorites may be resolved. Prove the rules of the Goclenian Sorites, and exhibit fully the various ways in which it reverses the procedure of the Aristotelian.

21. Distinguish Petitio Principii and Arguing in a Circle. How would you meet those Fallacies?

22. State in Syllogistic form the "Achilles and Tortoise" fallacy. Show where the error lies, and refer it to its proper head.

23. Examine the following arguments, specifying the Major, Middle, and Minor Terms, and the Major and Minor Premises of each:—

(*a.*) "The gaining of a high prize is no uncommon occurrence; what is no uncommon occurrence may reasonably be expected: therefore, the gaining of a high prize may reasonably be expected."

(*b.*) "Assuming that every exotic plant is interesting, but that not a few such plants are useless; we may infer that few things which are useless are also interesting."

24. Give an account of the controversy respecting Universals (Realism, &c.), accurately defining the several theories, naming (with dates) their advocates and noticing the leading arguments.

ENGLISH LANGUAGE.—*Examiner, Professor Moffett*, LL.D.

N.B.—Strict attention to be paid to Orthography, Punctuation, Syntax, and the choice of Words.

1. State the most general classification of Languages that has been made by recent philologists, and the general characteristics of the classes distinguished.

2. Enumerate and classify the Celtic Languages; and show by the test of flectional suffixes that this branch belongs to the Indo-European family.

3. Point out the places to be assigned to the following tongues in a classification of European Languages:—The Swedish, the Breton, the Bohemian, the Occitanian, the Dutch, the Portuguese, the French, the Russian.

4. State and illustrate Grimm's Law of Letter-change, so far as it bears on a comparison of the English Language with the Greek and the Latin.

5. Give an account of the successive forms of the Infinitive Mood in English verbs; with reference (*a.*) to the termination; (*b.*) to the prefix *to*.

6. Give a short account of the writings of Alfred, Joannes Erigena, and Roger Bacon, adding dates.

7. Describe generally the process by which Anglo-Saxon was converted into English.

8. Translate the following extract into modern English:—

"He nom the Englisca boc
Tha makede Seint Beda;
An other he nom on Latin,
Tha makede Seinte Albin,

Appendix No. 2.

Sessional Examinations.

And the feire Austin,
The fulluht broute hider in,
Boc he nom the thridde,
Leide ther amidden,
Tha makede a Frenchis clerc,
Wace was ihoten,
The wel couthe writen
And he hoe yef thare aethelen
Aelinor, the wes Henries quene,
Thes heyes kinges."

9. There were four regular metres in use before Chaucer's time: what poems of Chaucer are written in these metres?

10. Which of the following modes of Spelling do you adopt, and for what reasons?—Chemistry, chymistry; gipsy, gypsy; pigmy, pygmy; sirname, surname; pedler, pedlar; siren, syren; chrysolite, chrysolyte.

11. Give the derivations of the following words:—idyll, eclogue, esthetic, homage, bridegroom, average, atonement, spice, respite, walnut, miniature, miscreant.

12. Criticise the grammatical structure of the following passages:—

a. "Not heaven nor earth have been at peace to-night."

b. "During the last century no prime minister, however powerful, has become rich in office."

c. "In constructing and depicting of characters, Werner is little better than a mannerist."

d. "The following facts may, or have been, adduced on the other side."

e. "An extract from Mr. Hallam shall close the present section."

f. "I add no more, and believe me yours truly."

Chaucer and Shakespeare.

I. Quote any ten continuous lines that you may recollect from Chaucer and from Shakespeare; and remark upon whatever they may present notable either in a philological or in an esthetical point of view.

II. Explain the following italicized words and phrases:

a. "He *n'old avalen* neither hood ne hat."

b. "This goth aright; *unbokeled is the male.*"

c. "A thousand slain, and not *of qualm ystorven.*"

d. "In which there ran *a rumble and a swough.*"

e. ——"that been *cleped in scriptures*
That one *Puella*, that other *Rubeus.*"

f. "Lo Depeford, and it is *half way prime.*"

g. "*Unhousel'd, disappointed, unanel'd.*"

h. "But this *eternal blazon* must not be
To ears of flesh and blood."

i. "A little *more than kin* and *less than kind.*"

j. ——"such a deed
As *from the body of contraction plucks*
The very soul."

k. "*An aiery of children, little eyases* that cry out *on the top of question.*"

l. "Since no man *has aught of what he leaves, what is't to leave betimes?*"

III. Quote from an ancient Classic a parallel to the well-known words:—

"The undiscovered country, from whose bourn
No traveller returns."

Early English Text Society's Prize.

Appendix, No. 2.

Sessional Examinations.

1. In the thirteenth and fourteenth centuries, the English speech was represented by three principal dialects: state accurately their geographical limits, and account for the admixture of grammatical forms.

2. What is the most convenient test for distinguishing these dialects? Illustrate your answer.

3. Write in Anglo-Saxon:—

(*a.*) "Truth is there."
(*b.*) "I forgive thee this guilt."
(*c.*) "He gave it me this night."
(*d.*) "If he will thee to wife,
Wilt thou him have?
'Yea, lord, quoth that ladi.'"

4. Decline in Anglo-Saxon, the pronoun he, heo, hit.

5. Give the definite declension of *gode* (good) in early English.

6. Conjugate the verb *habben* (to have).

7. Conjugate in A. S. the present and past tenses of the indicative, and the imperative mood of the verb *loven* (to love).

8. Enumerate the poems of Minot.

9. Quote, or give the substance of, his reference to Merlin.

10. Explain the following passages:—

(*a*). "Mekille pride was thare in prese,
Both on pencelle, and on plate,
When the bare rade withouten rese,
Unto Cane the graythest gate."

(*b*). "He broght folk ful grete wone,
Ay sevyn oganis one,
That ful wele wapnid were."

(*c*). "The King of Beme had cares colde,
That was ful hardy and bolde
A stede to umstride,
The King als of Naverne
Was faire feld in the ferene
Thaire heviddes for to hide."

11. Explain the following passages in the vision of Piers Ploughman:—

(*a*). "He was lovelokest of siht
Aftur ur Lord,
Til he brak boxumnes."

(*b*). "Ther hoveth an hundret
In houves of selk,
Scriauns hit semeth.
To serven atte Barre,
Pleden for pons
And poundes the law."

(*c*). "Ful mekeliche he loutede,
And seide ful softely,
In schrift as hit weore."

(*d*). "An hundred of ampoulles
On his hat seeten,
Signes of Synay,
And Schelles of Galys,
And the vernicle bi-fore."

(*e*). "Bot I have porettes, and percyl
And mony col plontes."

(*f*). "Ne no beggere eten Bred,
That Benes inne coome,
But Coket and Cler-matin."

Appendix, No. 2.

Sessional Examinations.

12. Explain the following words:—

Cauri-mauri, regatorie, corseynt, swevene, tabart, ragemon, alblast, japes, donet, nakers, cheventeyn, avaled, to-logged, borwes, ffauvel, frek.

13. What were "The Four Orders?"

14. How does Mandeville describe "The See of Caspye?"

15. Write in Mandeville's language and orthography the following passage:—

"And ye shall understand, that I have put this book out of Latin into French, and translated it again out of French into English, that every man of my nation may understand it.

"But lords and knights, that know Latin but little, and have been beyond the sea, know and understand, if I say truth or no, and if I err in devising, for forgetting or else."

MATHEMATICS.—*Examiner, Professor Allman,* LL.D.

THIRD YEAR'S STUDENTS.

Honors.

1. Find the length of the axes of the section of an ellipsoid made by any plane passing through the centre.

2. (*a*). Prove Meunier's theorem: The radius of curvature of any oblique section is equal to the radius of curvature of the normal section through the same tangent line multiplied by the cosine of the angle between the planes.

(*b*). The parameter of any section of a cone perpendicular to a principal plane varies as the distance of that section from the vertex.

3. Find the co-ordinates of the centre and the radius of the *osculating* sphere of a curve of double curvature.

4. Through a given point there can always be described three surfaces of the second degree confocal with a given one.

5. If portions be taken on the normals to these three surfaces equal to their primary semi-axes respectively, and an ellipsoid be described whose semi-axes are equal to these lines; show that it will pass through the centre and touch one of the principal planes of the first system.

6. Find the curve in which the radius vector varies as the radius of curvature.

7. Prove the following theorems:

$$f(\mathrm{D})e^{m\theta}=f(m)\,e^{m\theta}\;;\quad f(\mathrm{D})e^{m\theta}u=e^{m\theta}f(\mathrm{D}+m)u\;;$$

$$x^n\frac{d^nu}{dx^n}=\mathrm{D}(\mathrm{D}-1)\;\ldots\;(\mathrm{D}-n+1)\,u.$$

8. Integrate the following differential equations:

$$(y-x)\;(1+x^2)^{\frac{1}{2}}dy-n(1+y^2)^{\frac{3}{2}}dx=0\;;\qquad (1+x^2)\frac{d^2y}{dx^2}+x\frac{dy}{dx}+n^2y=0\;;$$

$$\frac{d^2y}{dx^2}+3\frac{dy}{dx}+2y=\frac{x}{(1+x)^2}.$$

9. Integrate the partial differential equation:

$$x^2\frac{dz}{dx}+y^2\frac{dz}{dy}=\frac{x^3}{y};\quad x\frac{dz}{dx}+y\frac{dz}{dy}=2xy\sqrt{a^2-z^2}.$$

MATHEMATICS.—*Examiner, Professor Allman,* LL.D.

SECOND YEAR'S STUDENTS.

1. All chords of a conic section which subtend a right angle at a given point of the curve intersect on the normal at that point.

2. If a chord PP′ of a conic section pass through a fixed point O, prove that $\tan\frac{PFO}{2}\cdot\tan\frac{P'FO}{2}$ is constant where F is a focus of the curve.

3. Being given two points on a conic section and a directrix; find the locus of the corresponding focus.

4. If $y=z+x\phi(y)$, and $u=f(y)$; prove that $\frac{d^nu}{dx^n}=\frac{d^{n-1}}{dz^{n-1}}\left\{\phi(y)^n\frac{du}{dz}\right\}$.

5. Suppose u to be a function of r, and $r^2=x_1^2+x_2^2+x_3^2+\ldots\ldots+x_n^2$; then if $\frac{d^2u}{dx_1^2}+\frac{d^2u}{dx_2^2}+\ldots\ldots+\frac{d^2u}{dx_n^2}=0$, show that $\frac{d^2u}{dr^2}+\frac{n-1}{r}\frac{du}{dr}=0$.

6. Prove that the equation to the normal of the curve $x^2+y^2=a^{\frac{2}{3}}$, which makes an angle ϕ with the axis of x is $y\cos\phi-x\sin\phi=a\cos 2\phi$.

7. Find the equation to the evolute of the ellipse.

8. The equation to the catenary is $y=\frac{c}{2}\left\{e^{\frac{x}{c}}+e^{-\frac{x}{c}}\right\}$; prove that the area contained between the axes, the curve, and any ordinate is proportional to the length of the corresponding arc.

9. (*a*). Find $\int\left(\frac{m+x}{x}\right)^{\frac{1}{2}}dx$; $\int\frac{dx}{1+e^x}$; $\int\frac{dx}{a+b\cos x}$.

(*b*). Investigate the formula of reduction for $\int dx e^{ax}(\cos x)^n$.

FIRST YEAR'S STUDENTS.

1. Eliminate θ and ϕ between the equations:

$$a\cos\theta+b\sin\theta\cos\phi+c\sin\theta\sin\phi=d,$$
$$a\tan\theta=(b+c\tan\phi)\cos\phi,$$
$$\tan\phi=\frac{c}{b}.$$

2. Find expressions for the intervals between the middle point of the base of a spherical triangle and the feet of the perpendicular and the bisector of the vertical angle.

3. Find the area of the portion of the surface of a cone of revolution intercepted between two planes perpendicular to the axis.

4. If $x=\log\left(\tan\frac{\pi}{4}+\frac{y}{2}\right)$, prove that $\tan y=\frac{e^x-e^{-x}}{2}$.

5. Prove that the product of two determinants is the determinant whose constituents are the sums of the products of the constituents in any row of one by the corresponding constituents in any row of the other.

6. Find the value of k so that the following equation may have equal roots, $x^3+3x^2-9x+k=0$.

7. Solve the following equations:—

$x^4-45x^2-40x+84=0$, the difference between two roots of which is 3;

$x^4-8x^3+14x^2+8x-15=0$, the roots of which are in arithmetical progression.

8. Investigate the condition that three lines given by the equations $\rho\cos(\theta-\alpha_1)=p_1$, &c., shall meet in a point.

9. Find the equation of the circle passing through the point $x'y'$, and touching the axes of co-ordinates.

10. Given the base of a triangle and the product of the tangents of the halves of the base angles; find the locus of the vertex.

Appendix, No. 2.

Sessional Examinations.

Third Year's Arts.

Mixed Mathematics.—*Examiner, Professor Curtis,* LL.D.

Honors.

1. If a system of forces acting on a solid body be resolved into three forces X, Y, Z, acting at any assumed origin in three rectangular directions; and three couples, L, M, N, in planes perpendicular to these directions; prove that, however the origin and axes may vary, the quantity $Lx+My+Nz$ remains unchanged.

2. Determine the equation of equilibrium of a material point placed on a *smooth* surface—F = 0. Extend the result to the case where the surface is *rough*.

3. Find the centre of gravity of the area included by the curves $y^2=ax$, $x^2=by$.

4. A uniform string acted on by a central force assumes the form of an arc of a circle passing through the centre of force. Find how the force varies.

5. A body describes a cycloid under the action of a force whose direction is invariable. Find the law of force:—(*a.*) when it acts parallel to the base of the cycloid; (*b.*) when it acts perpendicularly to the base of the cycloid.

6. Prove the formulæ:—$v^2=F\frac{c}{2}$, $v^2=\frac{h^2}{p^2}$, applicable to the case of a body moving freely under the action of a central force.

7. State and prove Newton's construction for the time of describing any arc of a parabolic orbit described under the action of a force directed towards the focus, finding first the law of force.

8. Find the centre of pressure of a hexagon sunk obliquely in a liquid, one side being in the surface of the liquid.

9. A solid cylinder of height h, specific gravity ρ, and section a, rests in stable equilibrium with its axis vertical in a cylindrical vessel of section a', and containing a liquid whose specific gravity is ρ', if the solid be displaced vertically in the liquid, prove that it will oscilate like a simple pendulum whose length $=\frac{\rho(a'-a)}{\rho' a'}h$.

10. Find the nature of the surface, which bounding two given media, will cause a pencil of rays proceeding from a given point within one of them to be refracted to a given point within the other.

11. Find the caustic by reflection of a circle, the incident rays being parallel.

12. Explain the cause of "Aberration," and determine the aberratic curve.

Second Year's Arts and Engineering.

Honors.

1. If any system of forces in one plane be in equilibrium, prove that the algebraic sum of their moments with respect to any point in the plane is Zero.

2. Enumerate the several ways in which a couple may be modified without changing its effect, and prove what you state.

3. A heterogeneous plate, bounded by a rectilinear figure, rests with two of its sides pressing against two indefinitely thin rough pegs, A and C, whose axes are horizontal, the plane of the plate being consequently vertical, if (B being the intersection of these sides, produced, if necessary, and G the centre of gravity of the plate) B G be denoted by δ, and the angles A B G, C B G, A B C by β_1, β_2, β, while θ and α denote the inclinations to the horizon of A B and A C, b the distance A C, and ϵ the angle of friction for *each* peg: prove that when the plate is on the point of slipping θ must be formed from the equation:—

$$\delta\cos(\beta_1+\theta)=\frac{b\cos\epsilon}{\sin\beta}\sin(2\theta+\beta-\alpha+\epsilon)$$

4. If in last question r, r^1, the radii of the perpendicular sections of the cylindrical pegs be taken into account, the result is

$$\delta\cos(\beta_1+\theta)=\frac{\cos\epsilon}{\sin\beta}\Big((b\sin(2\theta+\beta-\alpha+\epsilon)-r\cos(\theta+\beta+\epsilon)-r^1\cos(\theta+\epsilon)\Big).$$

5. Three equal hemispheres, having their bases downwards, are placed on a horizontal plane, each in contact with the other two, if a smooth sphere of the same material and radius as the hemispheres be placed upon them, show that

in order that there should be equilibrium, the coefficients of friction between the plane and hemispheres must not be $< \frac{\sqrt{2}}{5}$, and that, if N be the pressure of the sphere on each of the hemispheres, and W its weight, $N = \frac{W}{\sqrt{6}}$.

6. If a body be projected in vacuo, prove that it will describe a parabola under the action of gravity.

7. Given the initial position and initial velocity, show that the direction of projection which gives maximum range on a given line passing through the initial position bisects the angle between this line and the vertical.

8. Determine the total pressure to which either face of an equilateral triangular plate is exposed by being sunk in the water, each side being 4 feet, and the depths to which the angular points are sunk being 8 feet, 9 feet, 10 feet, respectively.

9. If a parallelogram be sunk in a liquid in such a way that one diagonal is horizontal, and one extremity of the other diagonal in the surface of the liquid, prove that the centre of pressure cuts this latter diagonal in the ratio 7 : 5.

10. If, the other conditions being as in the last question, the upper and lower extremities of the latter diagonal be immersed to depths h_1, h_2, prove that the centre of pressure divides it in the ratio $7h_2+5h_1 : 7h_1+5h_2$.

11. The surface of separation between two given media is spherical, a system of rays diverging from, or converging to, a given point, pass from one of the media into the other, determine the position of the point of intersection of those refracted rays, which intersect the surface of separation at angles nearly right.

12. If α, β, γ, δ be the angles of a *Camera Lucida*, which produces, by two total eflexions, and two perpendicular transmissions, a horizontal image of a vertical object, prove that these angles must satisfy the following equations:—$\alpha+\beta=135°$, $\gamma=135°$, $\delta=90°$, with the conditions α not $< 41° 48'$ β not $< 41° 48'$. When $\alpha=\beta$ determine fully the values of the angles.

13. Assuming that the radius of the cornea of the human eye is ·31 inch, the index of refraction from air into water $\frac{4}{3}$, and that from air into glass 1·6, show that a double convex glass lens of equal curvatures, the radius of each surface of which = ·49 inch, will enable a person of average sight, when diving, to see distinctly an object under water at a distance of 8 feet.

14. Prove that for bodies near the zenith the effect of refraction on the altitude of the body is proportional to the tangent of the apparent zenith distance, and show how to determine *the coefficient of refraction.*

Second Year's Arts and Engineering.

Pass Paper.

1. If three forces acting at one point be in equilibrium, prove that they must all be in the same plane, and that the sum of any two of them must be greater than the third.

2. Find the resultant of two forces of 23 lbs., and 34 lbs., applied at a point, when their directors intersect:—(1) at 90°, (2) at 60°, (3) at 45°, (4) at 30°.

3. Prove the laws of composition and resolution of parallel forces.

4. Find the height through which a heavy body will fall from rest in four seconds; also the space described in the interval of time between the expiration of the third and fourth seconds.

5. Find the total velocity with which a body acted on by gravity will move after falling through 16 feet:—(1), when it starts from rest. (2), when it starts with an initial *upward* velocity of 20 feet per second. (3), when it starts with an initial *downward* velocity of 10 feet per second.

6. Establish the formula $t = \sqrt{\frac{2ls}{gh}}$, applicable to the case of a body falling down a smooth inclined plane.

7. A cubical vessel is filled with a liquid; prove that the total pressure to which any one of the vertical sides of the vessel is exposed, is equal to half the weight of the entire liquid.

8. If a cubic foot of wood when floating in water be immersed to a depth of 10 inches, what is its weight?

9. The radius of a concave spherical mirror is 16 inches: what is the position and magnitude of the image formed in it of a body 1 square inch in magnitude, at a distance from the mirror of 1 foot?

Appendix, No. 2.

Sessional Examinations.

10. Find the focal length of a *concavo-convex* lens of glass, the radii of whose surface are 8 inches, and 10 inches.

11. Prove that the latitude of a place is equal to the altitude of the pole at that place.

12. What corrections must be applied to the observed attitude of any heavenly body?

Third Year's Engineering.

Practical Mechanics.—*Examiner, Professor Curtis,* LL.D.

1. If a rope be made of wires whose diameter is d, show that the number of wires in each square inch of the section of the rope is very nearly given by the formula $\frac{2}{\sqrt{3}d^2}$, or $\frac{8}{7d^2}$

2. Water is raised to a height of 54 feet above the bottom of a fall of water of 14 feet, down which descend 200 cubic feet per minute, by means of a wheel worked by the fall, and having a modulus ·6; how many cubic feet of water will be thus raised per minute; and if the water be raised from the top of the fall to the same point, how many cubic feet will be raised? Answer, 31·1 and 34·7.

3. How many units of work must be expended in raising the materials for building a column of brickwork 100 feet high and 14 feet square; and in how many hours will an engine of 2 horse-power raise them? Answer, 109,760,000 units, 27·71 hours.

4. A wall of brickwork, 2 feet thick and 25 feet high, sustains on the inner edge of its summit a certain pressure on every foot of its length; the direction of this pressure is inclined to the horizon at an angle of 60°; find its amount when it will just not overthrow the wall. Answer, 520 lbs.

5. Describe exactly the three-fold effect of a buttress in supporting a wall subjected to a pressure tending to overthrow it.

6. Assuming the position of the centre of gravity of a homogeneous triangular area deduce the expression for the volume of a triangular pyramid, or of any cone.

7. Find the centre of gravity of the area of a semicircle.

8. If h is the height between two turns of the thread of a screw, r_1 and r_2 the radii of the internal and external cylinders, and θ_1, θ_2 the angles of inclination of the internal and external helices, show that—

$$\tan(\theta_1-\theta_2)=\frac{2\pi h(r_2-r_1)}{4\pi^2 r_1 r_2+h^2}.$$

9. Find the line of resistance of a river wall.

10. Find the positions of the crank of a fly-wheel in which the velocity is maximum or minimum, the pressure of the steam in the piston being invariable and given, and the resistance to the motion of the fly-wheel also given:—(*a*) when the engine is single-acting; (*b*) when the engine is double-acting.

Third Year's Arts, and Second Year's Engineering.

Experimental Physics.—*Examiner, Professor Curtis,* LL.D.

1. A body weighs 10 grains in vacuo, and 6 grains in water; find its specific gravity.

2. The diameters of the two pistons of a hydraulic press are 2 inches and 15 inches, respectively, the leverage of the handle gives a mechanical advantage of 12, a pressure of 10 lbs. is applied to the extremity of the handle; find the pressure transmitted to the larger piston.

3. If a vibrating rod, whose section is a rectangle, be rapidly rotated, the note produced will become variable, and beats will be heard; account for this.

4. Describe accurately the method employed by Dulong and Petit for determining the coefficient of absolute cubical dilatation of mercury, and give the numerical result.

5. Explain why the temperature of the boiling point of a liquid is diminished by diminishing the atmospheric pressure on the free surface of the liquid.

6. Define *Specific Heat*, and explain accurately how its amount may be determined by *the method of mixtures*.

7. Describe Faraday's experiment for proving that the electrical charge on a Leyden Jar does not reside on the metallic coatings, and state whether you consider the experiment perfectly conclusive or not, giving reasons for your opinion.

8. Explain the mode of using and the law of the *Sine Galvanometer*.

Special credit will be attached to the following questions:—

9. Deduce the formula for graduating Beaume's hydrometer.

10. The magnetic dip being observed in any two azimuths of the plane of motion of the dip needle differing by 90°, how would you thence deduce the true magnetic dip and the position of the magnetic meridian?

11. Describe accurately the two experiments devised and employed by Coulomb for determining the law of action between two magnetic poles, as a function of their distance, giving also the law, and a sketch of the calculations establishing it.

12. In Gauss' Bifilar Magnetometer prove that the three periods of vibration of the magnetic bar in the *direct*, *transverse*, and *inverse* positions are in geometrical progression.

13. An indefinitely long veritical voltaic current is acted on by a fixed horizontal magnet; find the direction of the force tending to move the current.

14. From Ohm's law deduce the two arrangements of 30 exactly similar galvanic cells, which will give the currents of maximum and minimum intensity respectively, the external resistance being to the internal as 9 : 2.

APPENDIX, No. 3.

SCHOLARSHIP EXAMINATIONS, 1868.

Literary Scholarships of the Second Year.

Greek.—*Examiner, Professor D'Arcy Thompson*, **M.A.**

Morning Paper.

1. Translate:—

Homer—*Iliad*, X.

πλάζομαι ὥδ', ἐπεὶ οὔ μοι ἐπ' ὄμμασι νήδυμος ὕπνος
ἰζάνει, ἀλλὰ μέλει πόλεμος καὶ κήδε' Ἀχαιῶν.
αἰνῶς γὰρ Δαναῶν περιδείδια, οὐδέ μοι ἦτορ
ἔμπεδον, ἀλλ' ἀλαλύκτημαι, κραδίη δέ μοι ἔξω
στηθέων ἐκθρώσκει, τρομέει δ' ὑπὸ φαίδιμα γυῖα.
ἀλλ' εἴ τι δραίνεις, ἐπεὶ οὐδὲ σέγ' ὕπνος ἱκάνει,
δεῦρ' ἐς τοὺς φύλακας καταβείομεν, ὄφρα ἴδωμεν,
μὴ τοὶ μὲν καμάτῳ ἀδηκότες ἠδὲ καὶ ὕπνῳ
κοιμήσωνται, ἀτὰρ φυλακῆς ἐπὶ πάγχυ λάθωνται.
δυσμενέες δ' ἄνδρες σχεδὸν εἵαται· οὐδέ τι ἴδμεν,
μή πως καὶ διὰ νύκτα μενοινήσωσι μάχεσθαι.

(*a*.) Give the Attic equivalents for δείδια, καταβείομεν, εἵαται.

(*b*.) How is the verb δραίνω formed? Give another verb formed similarly.

(*c*.) Who is the speaker in the above passage, and whom is he addressing?

Appendix, No. 3.

Scholarship Examinations.

2. (A.) Translate:—

EURIPIDES—*Bacchæ.*

ΠΕ. *πόθεν δὲ τελετὰς τάσδ' ἄγεις εἰς Ἑλλάδα;*
ΔΙ. *Διόνυσός ἡμᾶς εἰσέβησ' ὁ τοῦ Διός.*
ΠΕ. *Ζεὺς δ' ἔστ' ἐκεῖ τις, ὃς νέους τίκτει θεούς;*
ΔΙ. *οὔκ, ἀλλ' ὁ Σεμέλην ἐνθάδε ζεύξας γάμοις.*
ΠΕ. *πότερα δὲ νύκτωρ σ' ἢ κατ' ὄμμ' ἠνάγκασεν;*
ΔΙ. *ὁρῶν ὁρῶντα, καὶ δίδωσιν ὄργια.*
ΠΕ. *τὰ δ' ὄργι' ἐστὶ τίν' ἰδέαν ἔχοντά σοι;*
ΔΙ. *ἄρρητ' ἀβακχεύτοισιν εἰδέναι βροτῶν.*
ΠΕ. *ἔχει δ' ὄνησιν τοῖσι θύουσιν τίνα;*
ΔΙ. *οὐ θέμις ἀκοῦσαί σ', ἔστι δ' ἄξι' εἰδέναι.*
ΠΕ. *εὖ τοῦτ' ἐκιβδήλευσας, ἵν' ἀκοῦσαι θέλω.*
ΔΙ. *ἀσέβειαν ἀσκοῦντ' ὀργὴ ἐχθαίρει θεοῦ.*
ΠΕ. *τὸν θεὸν ὁρᾶν γὰρ φὴς σαφῶς, ποῖός τις ἦν;*
ΔΙ. *ὁποῖος ἤθελ'· οὐκ ἐγὼ "τασσον τόδε.*
ΠΕ. *τοῦτ' αὖ παρωχέτευσας εὖ, κοὐδὲν λέγων.*
ΔΙ. *δόξει τις ἀμαθεῖ σοφὰ λέγων οὐκ εὖ φρονεῖν.*

(*a.*) Give the derivation of *κιβδηλεύω* and *παροχετεύω*.

(*b.*) What is the government of *βροτῶν* in the eighth line above?

(*c.*) Could you alter the meaning of the ninth line by an alteration in the accents?

(B.) Translate:—

EURIPIDES—*Bacchæ*, 882–892.

ὀρμᾶται μόλις, ἀλλ' ὅμως *ἀντ.*
πιστὸν τό [γε] θεῖον
σθένος· ἀπευθύνει δὲ βροτῶν
τούς τ' ἀγνωμοσύναν
τιμῶντας καὶ μὴ τὰ θεῶν
αὔξοντας σὺν μαινομένᾳ δόξᾳ.
κρυπτεύουσι δὲ ποικίλως
δαρὸν χρόνου πόδα καὶ
θηρῶσιν τὸν ἄσεπτον. οὐ
γὰρ κρεῖσσόν ποτε τῶν νόμων
γιγνώσκειν χρὴ καὶ μελετᾶν.

(*a.*) What is the government of *δαρὸν πόδα*?

(*b.*) What part of speech is *κρεῖσσον*? Compare it.

3. Translate:—

XENOPHON—*Hellenics*, Book IV.

Ὦ ἄνδρες, νῦν ἔξεστιν ὑμῖν, καὶ πρόσθεν φίλοις οὖσι τῇ πόλει ἡμῶν, εὐεργέτας φανῆναι τῶν Λακεδαιμονίων. καὶ γὰρ τὸ μὲν ἐν ταῖς εὐπραξίαις πιστοὺς φαίνεσθαι, οὐδὲν θαυμαστόν· ὅταν δέ τινες, ἐν συμφοραῖς γενομένων φίλων, βέβαιοι φανῶσι, τοῦτ' εἰς τὸν ἅπαντα χρόνον μνημονεύεται. ἔστι δὲ οὐχ οὕτως ἔχον, ὡς, εἰ τῇ ναυμαχίᾳ ἐκρατήθημεν, οὐδὲν ἄρα ἔτι ἐσμέν· ἀλλὰ καὶ τὸ πρόσθεν δήπου, Ἀθηναίων ἀρχόντων τῆς θαλάττης, ἱκανὴ ἦν ἡ ἡμετέρα πόλις καὶ εὖ φίλους καὶ κακῶς ἐχθροὺς ποιεῖν. ὅσῳ δὲ μᾶλλον αἱ ἄλλαι πόλεις σὺν τῇ τύχῃ ἀπεστράφησαν ἡμῶν, τοσούτῳ ὄντως ἡ ὑμετέρα πιστότης μείζων φανείη ἄν. εἰ δέ τις τοῦτο φοβεῖται, μὴ καὶ κατὰ γῆν καὶ κατὰ θάλατταν ἐνθάδε πολιορκώμεθα, ἐννοείτω ὅτι Ἑλληνικὸν μὲν οὔπω ναυτικὸν ἐστιν ἐν τῇ θαλάττῃ· οἱ δὲ βάρβαροι εἰ ἐπιχειρήσουσι τῆς θαλάττης ἄρχειν, οὐκ ἀνέξεται ταῦτα ἡ Ἑλλάς· ὥσθ' ἑαυτῇ ἐπικουροῦσα, καὶ ὑμῖν ξύμμαχος γενήσεται.

4. Give short accounts of Aristomenes, Cleisthenes, Phormio, Brasidas, Æschines, and Lysander. *Appendix, No. 3.*

5. Sketch briefly the form of government that existed in Athens at the commencement of the Peloponnesian war. Scholarship Examinations.

6. Give the positions of Chalcedon, Arginussæ, Haliartus, Sinus Thermaïcus, Sybaris, Tanagra, Tegea, Sinus Maliacus, Mons Eryx, Lampsacus, Leucate, Mons Sipylus.

Professor D'Arcy Thompson, M.A.

AFTERNOON PAPER.

1. Translate:—

DEMOSTHENES—*First Olynthiac.*

Τοῦτο δὴ πρῶτον αὐτὸν ταράττει παρὰ γνώμην γεγονὸς καὶ πολλὴν ἀθυμίαν αὐτῷ παρέχει, εἶτα τὰ τῶν Θετταλῶν. ταῦτα γὰρ ἄπιστα μὲν ἦν δήπου φύσει καὶ ἀεὶ πᾶσιν ἀνθρώποις, κομιδῇ δ', ὥσπερ ἦν, καὶ ἔστι νῦν τούτῳ. καὶ γὰρ Παγασὰς ἀπαιτεῖν αὐτόν εἰσιν ἐψηφισμένοι καὶ Μαγνησίαν κεκωλύκασι τειχίζειν. ἤκουον δ' ἔγωγέ τινων ὡς οὐδὲ τοὺς λιμένας καὶ τὰς ἀγορὰς ἔτι δώσοιεν αὐτῷ καρποῦσθαι· τὰ γὰρ κοινὰ τὰ Θετταλῶν ἀπὸ τούτων δέοι διοικεῖν, οὐ Φίλιππον λαμβάνειν. εἰ δὲ τούτων ἀποστερηθήσεται τῶν χρημάτων, εἰς στενὸν κομιδῇ τὰ τῆς τροφῆς τοῖς ξένοις αὐτῷ καταστήσεται. ἀλλὰ μὴν τόν γε Παίονα καὶ τὸν Ἰλλυριὸν καὶ ἁπλῶς τούτους ἅπαντας ἡγεῖσθαι χρὴ αὐτονόμους ἥδιον ἂν καὶ ἐλευθέρους ἢ δούλους εἶναι· καὶ γὰρ ἀήθεις τοῦ κατακούειν τινός εἰσι, καὶ ἄνθρωπος ὑβριστής, ὥς φασιν. καὶ μὰ Δί' οὐδὲν ἄπιστον ἴσως· τὸ γὰρ εὖ πράττειν παρὰ τὴν ἀξίαν ἀφορμὴ τοῦ κακῶς φρονεῖν τοῖς ἀνοήτοις γίγνεται, διόπερ πολλάκις δοκεῖ τὸ φυλάξαι τἀγαθὰ τοῦ κτήσασθαι χαλεπώτερον εἶναι.

(*a.*) What is the force of the optative mood in *δώσοιεν* and *δέοι* in the above passage?

2. Render into Greek the following:—

"Shall I then," asked Pharnabazus, "tell you in one word what I mean to do?" "It will be well for you to do so," said Agesilaus. "Then," continued Pharnabazus, "if the king sends down another satrap, and orders me to be subject to him, I shall willingly become your friend and ally. But, if he assign the supreme command to me, you may be assured that (such, it seems, is the influence of ambition) I shall prosecute the war against you to the utmost of my power." Agesilaus, on hearing this, took hold of his hand and said, "Most noble Sir, I could well wish that you, with such qualities, would become our friend! But be assured of one thing, that I will march out of your province as soon as I can; and, for the future, if the war continue, we will, as long as we have another to attack, forbear from molesting you and yours."

LITERARY SCHOLARSHIPS OF THE FIRST YEAR.

GREEK.—*Examiner, Professor D'Arcy Thompson*, M.A.

FIRST PAPER.

1. Translate:—

HOMER—*Iliad*, VI., 128–143.

Εἰ δέ τις ἀθανάτων γε κατ' οὐρανοῦ εἰλήλουθας,
οὐκ ἂν ἔγωγε θεοῖσιν ἐπουρανίοισι μαχοίμην.
οὐδὲ γὰρ οὐδὲ Δρύαντος υἱὸς, κρατερὸς Λυκόοργος,
δὴν ἦν, ὅς ῥα θεοῖσιν ἐπουρανίοισιν ἔριζεν·
ὅς ποτε μαινομένοιο Διωνύσοιο τιθήνας
σεῦε κατ' ἠγάθεον Νυσήϊον· αἱ δ' ἅμα πᾶσαι
θύσθλα χαμαὶ κατέχευαν, ὑπ' ἀνδροφόνοιο Λυκούργου
θεινόμεναι βουπλῆγι, Διώνυσος δὲ φοβηθεὶς
δύσεθ' ἁλὸς κατὰ κῦμα, Θέτις δ' ὑπεδέξατο κόλπῳ
δειδιότα· κρατερὸς γὰρ ἔχε τρόμος ἀνδρὸς ὁμοκλῇ.

Appendix, No. 3.

Scholarship Examinations.

τῷ μὲν ἔπειτ' ὀδύσαντο θεοὶ ῥεῖα ζώοντες,
καί μιν τυφλὸν ἔθηκε Κρόνου παῖς· οὐδ' ἄρ' ἔτι δὴν
ἦν, ἐπεὶ ἀθανάτοισιν ἀπήχθετο πᾶσι θεοῖσιν.
οὐδ' ἂν ἐγὼ μακάρεσσι θεοῖς ἐθέλοιμι μάχεσθαι.
εἰ δέ τίς ἐσσι βροτῶν, οἳ ἀρούρης καρπὸν ἔδουσιν,
ἄσσον ἴθ', ὥς κεν θᾶσσον ὀλέθρου πείραθ' ἵκηαι.

(*a.*) How is *δὴν* used with the substantive verb in the above? Can you instance similar words used similarly with the same verb?

(*b.*) Write in Attic the words or expressions, *ἐξαπολοίατο, κεκμηῶτι, ἀγλαΐῃφι, σεῖο, τελέεσσι, ζωῷσι νεήνισιν.*

2. Translate:—

EURIPIDES—*Phœnissæ*, 541–557.

Καὶ γὰρ μέτρ' ἀνθρώποισι καὶ μέρη σταθμῶν
ἰσότης ἔταξε κἀριθμὸν διώρισε,
νυκτός τ' ἀφεγγὲς βλέφαρον ἡλίου τε φῶς
ἴσον βαδίζει τὸν ἐνιαύσιον κύκλον,
κοὐδέτερον αὐτῶν φθόνον ἔχει νικώμενον.
εἶθ' ἥλιος μὲν νύξ τε δουλεύει βροτοῖς,
σὺ δ' οὐκ ἀνέξει δωμάτων ἔχων ἴσον
καὶ τῷδ' ἀπονέμειν; κᾆτα ποῦ 'στιν ἡ δίκη;
τί τὴν τυραννίδ', ἀδικίαν εὐδαίμονα,
τιμᾷς ὑπέρφευ καὶ μέγ' ἥγησαι τόδε;
περιβλέπεσθαι τίμιον; κενὸν μὲν οὖν.
ἢ πολλὰ μοχθεῖν πόλλ' ἔχων ἐν δώμασι
βούλει; τί δ' ἔστι τὸ πλέον; ὄνομ' ἔχει μόνον·
ἐπεὶ τά γ' ἀρκοῦνθ' ἱκανὰ τοῖς γε σώφροσιν.
οὗτοι τὰ χρήματ' ἴδια κέκτηνται βροτοί,
τὰ τῶν θεῶν δ' ἔχοντες ἐπιμελούμεθα·
ὅταν δὲ χρῄζωσ', αὖτ' ἀφαιροῦνται πάλιν.

(*a.*) What is the government of *τὸν ἐνιαύσιον κύκλον* in the above?

(*b.*) Write down the first persons singular of future and second aorist, active, of *ἀνέχω, κατέχω, ἀπέχω.*

3. Translate:—

LUCIAN.

ΦΙΛ. Ὡς δὴ τί τοῦτο, ὦ Μένιππε; οὐ γὰρ συνίημι τὴν αἰτίαν οὔτε τοῦ σχήματος, οὔτε τῶν ὀνομάτων. ΜΕΝ. Καὶ μὴν πρόδηλόν γε τοῦτο, καὶ οὐ παντελῶς ἀπόῤῥητον· ἐπεὶ γὰρ οὗτοι πρὸ ἡμῶν ζῶντες ἐς ᾅδου κατεληλύθεσαν, ἠγεῖτο, εἴ με ἀπεικάσειεν αὐτοῖς, ῥᾳδίως ἂν τὴν τοῦ Αἰακοῦ φρουρὰν διαλαθεῖν, καὶ ἀκωλύτως παρελθεῖν, ἅτε συνηθέστερον τραγικῶς μάλα παραπεμπόμενον ὑπὸ τοῦ σχήματος. Ἤδη δ' οὖν ὑπέφαινεν ἡμέρα· καὶ κατελθόντες ἐπὶ τὸν ποταμὸν περὶ ἀναγωγὴν ἐγιγνόμεθα· παρεσκεύαστο δ' αὐτῷ καὶ σκάφος, καὶ ἱερεῖα, καὶ μελίκρατα, καὶ ἄλλα, ὅσα πρὸς τὴν τελετὴν χρήσιμα. ἐμβαλόμενοι οὖν ἅπαντα τὰ παρεσκευασμένα οὕτω δὴ καὶ αὐτοὶ

Βαίνομεν ἀχνύμενοι, θαλερὸν κατὰ δάκρυ χέοντες.

(*a.*) Give the nominative masculine singular of participles of present and second aorist, active, of any compound of *ἵημι.*

(*b.*) What is the subject, or nominative case, to *παρεσκεύαστο*, above?

(*c.*) Explain *ἀναγωγὴ* and *καταγωγὴ* as nautical terms.

4. (*a.*) Give a brief account of the origin of the Peloponnesian war.

(*b.*) What is meant by *petalism?* Where was it practised?

(*c.*) Give a brief biographical account of Thucydides and Xenophon.

5. Give the positions of Thurium, Naxos, Gela, Phocæa, Agrigentum, Thapsus, Metapontum, Colophon, the Granicus, Paphos, the Orontes, Mount Tmolus.

Professor D'Arcy Thompson, M.A.

Appendix, No. 2.

Scholarship Examinations.

SECOND PAPER.

Translate:—

XENOPHON—*Anabasis*, Book III., chap. v., 8-12.

Ἀπορουμένοις δ' αὐτοῖς προσελθών τις ἀνὴρ Ῥόδιος εἶπεν, Ἐγὼ θέλω, ὦ ἄνδρες, διαβιβάσαι ὑμᾶς κατὰ τετρακισχιλίους ὁπλίτας, ἂν ἐμοὶ ὧν δέομαι ὑπηρετήσητε καὶ τάλαντον μισθὸν πορίσητε. ἐρωτώμενος δὲ ὅτου δέοιτο Ἀσκῶν, ἔφη, δισχιλίων δεήσομαι· πολλὰ δ' ὁρῶ ταῦτα πρόβατα καὶ αἶγας καὶ βοῦς καὶ ὄνους, ἃ ἀποδαρέντα καὶ φυσηθέντα ῥᾳδίως ἂν παρέχοι τὴν διάβασιν. δεήσομαι δὲ καὶ τῶν δεσμῶν οἷς χρῆσθε περὶ τὰ ὑποζύγια· τούτοις ζεύξας τοὺς ἀσκοὺς πρὸς ἀλλήλους, ὁρμίσας ἕκαστον ἀσκὸν λίθους ἀρτήσας καὶ ἀφεὶς ὥσπερ ἀγκύρας εἰς τὸ ὕδωρ, διαγαγὼν καὶ ἀμφοτέρωθεν δήσας ἐπιβαλῶ ὕλην καὶ γῆν ἐπιφορήσω· ὅτι μὲν οὖν οὐ καταδύσεσθε αὐτίκα μάλα εἴσεσθε· πᾶς γὰρ ἀσκὸς δύο ἄνδρας ἔξει τοῦ μὴ καταδῦναι· ὥστε δὲ μὴ ὀλισθάνειν ἡ ὕλη καὶ ἡ γῆ σχήσει. ἀκούσασι ταῦτα τοῖς στρατηγοῖς τὸ μὲν ἐνθύμημα χαρίεν ἐδόκει εἶναι, τὸ δ' ἔργον ἀδύνατον· ἦσαν γὰρ οἱ κωλύσοντες πέραν πολλοὶ ἱππεῖς, οἳ εὐθὺς τοῖς πρώτοις οὐδὲν ἂν ἐπέτρεπον τούτων ποιεῖν.

(*a.*) State what is peculiar in the use of *θέλω* in the expression *θέλω διαβιβάσαι* above.

(*b.*) Why is *δέοιτο* in the optative?

(*c.*) Give an instance from the above of a preposition used in a *distributive* sense.

(*d.*) Give an instance from the above of a negative particle being used where, according to our idiom, it would be, or would seem to be, redundant.

2. Render into Greek the following sentences:—

(*a.*) I love those-that-love-me.[1]
(*b.*) I do not wish to-go-away.[2]
(*c.*) I wish not to go away.
(*d.*) My brother's friends and mine will-be[3] present.
(*e.*) If I see the man, I will[4] kill him.
(*f.*) If I-should-see[4] the man, I would not hurt him.
(*g.*) If I had seen the man, I should not have hurt him.
(*h.*) Are you my father?
(*i.*) You are my brother, are you not?
(*j.*) You are not my daughter, are you?
(*k.*) You are either my friend or my enemy.
(*l.*) I never was[5] either your friend or your brother's friend.

(1) Participial usage.
(2) Use either infinitive of *ἄπειμι* or of *ἀπῆλθον*, and state in a note when you would prefer to use the latter.
(3) Future of *πάρειμι*.
(4) Future of *ἀποκτείνω*. In a note write down the full future tense of the verb.
(5) Use in this sentence a Greek idiom which could not be employed in our own tongue.

LITERARY SCHOLARSHIPS—SECOND YEAR.

FRENCH.—*Examiner* (*pro tempore*), *Professor D'Arcy Thompson.*

1. Translate:—

Abner. Hé! que puis-je au milieu de ce peuple abattu?
Benjamin est sans force, et Juda sans vertu:
Le jour qui de leurs rois vit éteindre la race
Eteignit tout le feu de leur antique audace.
Dieu même, disent-ils, s'est retiré de nous:
De l'honneur des Hébreux autrefois si jaloux,
Il voit sans intérêt leur grandeur terrassée;
Et sa miséricorde à la fin s'est lassée.

Appendix, No. 3.

Scholarship Examinations.

2. Translate :—

Pyrrhus. Qui croirait, en effet, qu'une telle entreprise
Du fils d'Agamemnon méritât l'entremise ;
Qu'un peuple tout entier, tant de fois triomphant,
N'eût daigné conspirer que la mort d'un enfant ?
Mais à qui prétend-on que je le sacrifie ?
La Grèce a-t-elle encor quelque droit sur sa vie ?
Et, seul de tous les Grecs, ne m'est-il pas permis
D'ordonner d'un captif que le sort m'a soumis ?

3. Translate :—

Certainement si une constitution avait pu se consolider à cette époque, c'était la constitution directoriale. Elle refaisait le pouvoir, permettait la liberté, et offrait aux divers partis l'occasion de la paix, si chacun d'eux, sans arrière-pensée, ne songeant plus à la domination exclusive et se contentant du droit commun, eût pris sa véritable place dans l'Etat. Mais elle ne dura pas plus que les autres, parce qu'elle ne put pas établir l'ordre légal malgré les partis. Chacun d'eux aspira au gouvernement pour faire valoir son système et ses intérêts, et, au lieu du règne de la loi, il fallut retomber encore dans celui de la force et des coups d'Etat.

4. Translate :—

Craignez, repartit Mentor, qu'elle ne vous accable de maux, craignez ses trompeuses douceurs plus que les écueils qui ont brisé votre navire ; le naufrage et la mort sont moins funestes que les plaisirs qui attaquent la vertu. Gardez-vous bien de croire ce qu'elle vous racontera. La jeunesse est présomptueuse, elle se promet tout d'elle-même ; quoique fragile, elle croit pouvoir tout, et n'avoir jamais rien à craindre ; elle se confie légèrement et sans précaution. Gardez-vous d'écouter les paroles douces et flatteuses de Calypso, qui se glisseront comme un serpent sous les fleurs ; craignez ce poison caché ; défiez-vous de vous-même, et attendez toujours mes conseils.

5. (*a*) When are substantives, in the nominative or accusative case, preceded by *du, de la, des ?*

(*b*) When are substantives, in the nominative or accusative case, preceded by *de* without the article ?

(*c*) What are the four terminations of the Infinitive Mood ?

(*d*) Give the rule, or rules, for the *past participle* accompanied by the verb *avoir.*

(*e*) Mention six adjectives that usually precede their substantives, and four adjectives that vary in signification according as they precede or follow them.

(*f*) Give fully the meaning of the two sentences :

(1) Montrez-moi *le garçon qui veut* me tromper.
(2) Montrez-moi *un garçon qui veuille* me tromper.

6. (*a*) Name three of the chief pulpit-orators of the time of Louis XIV.

(*b*) Name the chief work or works of La Bruyère, Bayle, Montesquieu, Condillac, Buffon, Madame de Staël.

7. Translate into French the following :—

Oratory is to be estimated on principles different from those which are applied to other productions. Truth is the object of philosophy and history. Truth is the object even of those works which are peculiarly called works of fiction, but which, in fact, bear the same relation to history which algebra bears to arithmetic. The merit of poetry, in its wildest forms, still consists in its truth,—truth conveyed to the understanding, not directly by the words, but circuitously by means of imaginative associations, which serve as conductors. The object of oratory alone is not truth, but persuasion.

Science Scholarships—Second Year.

Mathematics.—*Examiner, Professor Allman,* LL.D.

1. Find the locus of a point such that the tangents drawn from it to two given circles shall be equal.

2. If $a=9$, $b=7$, $C=64° 12'$, find the remaining angles.

Given log 2=·30103, L cot 32° 6′=10·2025255.
L tan 11° 16′=9·2993216, Diff. for 1′=6588.

3. In any plane triangle prove that

$$2ab\cos C+2bc\cos A+2ca\cos B=a^2+b^2+c^2.$$

4. Prove that polygons formed by cutting a pyramid by parallel planes are similar.

5. Compare the arc of a small circle subtending any angle at the centre of the circle, with the arc of a great circle subtending the same angle at its centre.

6. In a spherical triangle prove the formula—

$$\cot a\sin b=\cot A\sin C+\cos b\cos C.$$

7. Find the equation of a straight line parallel to a given one, and passing through a given point.

8. Find the equation of the tangent at the point $x^1 y^1$ to a given circle.

9. The equations of the sides of a triangle are $\alpha=0$, $\beta=0$, $\gamma=0$; find the equations of the perpendiculars, and show that they meet in a point.

10. Transform the equation $x^3-7x+7=0$, into one whose roots shall be less than the roots of this by 2.

11. Form the equation whose roots are

$$4, -1, \tfrac{1}{2}(-3\pm\sqrt{-31}).$$

12. Find the expanded value of the determinant

$$\begin{vmatrix} a, & b, & c \\ b, & a, & d \\ c, & d, & a \end{vmatrix}.$$

Professor Allman, LL.D.

1. Prove that if from any point on the surface of a sphere three chords be drawn at right angles to each other, the sum of their squares is constant.

2. Prove that $\frac{\pi}{4}=4\tan^{-1}\frac{1}{5}-\tan^{-1}\frac{1}{239}$.

3. If a right-angled spherical triangle be inscribed in a given lesser circle, its vertex being at a fixed point, prove that the hypotenuse passes through a fixed point.

4. ACB is a given triangle, H, K, L, given points on the side AB; through H is drawn any straight line cutting AC, BC, in E, F, respectively; through E and F are drawn right lines EL, FK, intersecting in P. Find the locus of P.

5. Straight lines are drawn from the extremities of a given diameter of a circle to the extremities of a chord which subtends a given angle at the centre: find the locus of the intersection of these straight lines.

6. Find the locus of a point from which if perpendiculars be let fall on the sides of a triangle, and their feet joined, the triangle so formed shall have a constant area.

7. The roots of the equation $x^4+px^3+qx^2+rx+s=0$, are, α, β, γ, δ; find $\alpha^2\beta^2\gamma^2+\alpha^2\gamma^2\delta^2+\alpha^2\beta^2\delta^2+\beta^2\gamma^2\delta^2$ in terms of the coefficients.

8. Prove that

$$\begin{vmatrix} 0, & 1, & 1, & 1 \\ 1, & 0, & z^2, & y^2 \\ 1, & z^2, & 0, & x^2 \\ 1, & y^2, & x^2, & 0 \end{vmatrix}=-(x+y+z)(y+z-x)(z+x-y)(x+y-z).$$

Appendix, No. 3.

Scholarship Examinations.

Science Scholarships—First Year.

Arithmetic.—*Examiner, Professor Allman,* LL.D.

1. State and prove the rule for reducing fractions to equivalent fractions with a common denominator. Point out the importance of this transformation. Reduce $\frac{3}{5}$, $\frac{5}{7}$, $1\frac{7}{12}$, $\frac{3}{2}\frac{1}{6}$, to equivalent fractions having their least common denominator.

2. Give the method of reducing a vulgar to an equivalent decimal fraction. Show that certain vulgar fractions can be expressed accurately as decimals. Prove that when the decimal does not terminate it must recur.

3. Write down the English and French tables of weight. What is the equivalent of a kilogram in English weight? Deduce hence the values of the other weights in the metric table in English weights.

4. A person bought 1,000 dollars, United States 5/20 bonds, bearing interest at 6 per cent., at $65\frac{1}{4}$; three years later he sold them at $72\frac{1}{8}$; how much did he gain, the dollar being estimated at 4*s.* 6*d.*, and the brokerage on each transaction being 11*s.* 3*d.*? What rate of interest had he on the investment, the average selling price of the dollar being 4*s.* $0\frac{1}{2}$*d.*?

5. Explain the principle of the Rule of Practice. A gentleman's gross rental is £1,384 16*s.*, the rentcharges upon it amount to 14*s.* $9\frac{1}{2}$*d.* in £1; find by Practice his net rental.

6. Find the cost of papering a square room, whose length is 12ft. 9in., and height 10ft. 3in., at 10*d.* per square yard.

7. If 63lbs. of tea cost £20 10*s.* 6*d.*, what cost 70lbs. of a different quality, 9lbs. of the former being equal in value to 10lbs. of the latter?

8. Reduce to a decimal, accurate to five places,

$$16\left(\frac{1}{5}-\frac{1}{3\cdot5^3}+\frac{1}{5\cdot5^5}-\frac{1}{7\cdot5^7}+, \text{ \&c.}\right)-\frac{4}{239}.$$

Professor Allman, LL.D.

1. Solve the equations:

$$\frac{1}{x-a}+\frac{1}{x-b}+\frac{1}{x-c}=0\,;\ \sqrt{x}+\sqrt{(x+7)}+2\sqrt{(x^2+7x)}=35-2x.$$

2. Divide $x^3+y^3+z^3-3xyz$ by $x+y+z$; and show that the following expression is an exact square:

$$(x^2-yz)^3+(y^2-zx)^3+(z^2-xy)^3-3(x^2-yz)(y^2-zx)(z^2-xy).$$

3. A railway train running from London to Bristol meets on the way with an accident, which causes it to diminish its speed to $\frac{1}{n^{th}}$ of what it was before, and it is in consequence a hours late. If the accident had happened b miles nearer Bristol, the train would have been c hours late. Find the rate of the train before the accident occurred.

4. What are eggs a dozen when two more in a shilling's worth lowers the price one penny per dozen?

5. In a right-angled triangle if the square on one of the sides containing the right angle be three times the square on the other, and from the right angle two straight lines be drawn, one to bisect the opposite side, and the other perpendicular to that side, these straight lines divide the right angle into three equal parts.

6. Through any point within a circle two chords are drawn at right angles to each other; show that the sum of the squares on them is constant.

7. Two triangles ACB, DCE, of which one, DCE, is isosceles, have a common vertical angle, and the side of the isosceles triangle (DC equal to CE) is a mean proportional between the sides AC, CB of the other; prove that the triangles are equal to one another.

8. The opposite sides of a quadrilateral inscribed in a circle when produced meet at P and Q; show that the square on PQ is equal to the sum of the squares on the tangents from P and Q to the circle.

9. If $\cos\theta=\frac{\cos\alpha+\cos\beta}{1+\cos\alpha\cos\beta}$, prove that $\tan\frac{\theta}{2}=\tan\frac{\alpha}{2}\tan\frac{\beta}{2}$.

10. In a triangle prove the formula—

$$\sin\frac{A-B}{2}=\frac{a-b}{c}\cos\frac{C}{2}.$$

11. In a triangle, given $a+b=\delta$, c and C, prove that

$a=\delta\cos^2\frac{\phi}{2}$, $b=\delta\sin^2\frac{\phi}{2}$, when ϕ is given by the equation—

$$\sin\phi=\pm\frac{\sqrt{(\delta^2-c^2)}}{\delta}\sec\frac{C}{2}.$$

12. Prove the formulæ:

$$\sin A\,(1+\tan A)+\cos A\,(1+\cot A)=\sec A+\operatorname{cosec} A;$$

$$\frac{\sin(A+B+C)}{\cos A\cos B\cos C}=\tan A+\tan B+\tan C-\tan A\tan B\tan C.$$

Senior Scholarship—Mathematics.

1. Find the product of the squares of the differences of the roots of an equation.

2. Explain Lagrange's method of *indeterminate multipliers*, and apply it to the solution of the following problem. Find a point within a triangle, such that, if perpendiculars be let fall on the sides and their feet joined, the triangle thus formed shall be a maximum.

3. Eliminate the arbitrary functions from the equation

$$z=\phi(a)-x\phi'(a)+\psi(\beta)+x\psi(\beta),\text{ where } y=\frac{\alpha+\beta}{2},\ x=\frac{\alpha-\beta}{2}.$$

4. Find the conditions which must be satisfied in order that the general equation of the second degree shall represent a surface of revolution.

5. Find the locus of the foot of the perpendicular from a given point on the plane which passes through the extremities of three conjugate diameters of an ellipsoid.

6. Find the equations of the tangent to the curve of intersection of the surfaces $x^2+y^2+z^2=4a^2$, $x^2+z^2=2ax$, at the point (x_1, y_1, z_1): find also the equation of the normal plane at that point.

7. Find the differential equations of the projection on the plane xy of the lines of curvature of the ellipsoid

$$\frac{x^2}{a^2}+\frac{y^2}{b^2}+\frac{z^2}{c^2}=1,\ \left\{\ Axy\left(\frac{dy}{dx}\right)^2+(x^2-Ay^2-B)\frac{dy}{dx}-xy=0\ \right\}.$$

8. Integrate this equation.

9. Determine a curve, such that the portion of its tangent intercepted between two rectangular lines shall be constant.

10. Integrate the differential equations

$$x^2\frac{d^2y}{dx^2}-x\frac{dy}{dx}=3y;\ 1+\left(\frac{dy}{dx}\right)^2+y\frac{d^2y}{dx^2}=0;\ xzp+yzq=xy.$$

11. Integrate the partial differential equation $rt^2-2sxy+tx^2=px+qy-z$, by assuming $x=u\cos v$, $y=u\sin v$.

12. Investigate the volume of a solid referred to polar co-ordinates, and point out the limits between which the integrations must be taken, distinguishing the cases when the origin is within and without the volume.

A right cone has its vertex on the surface of a sphere, and its axis coincident with the diameter of the sphere passing through that point; find the volume common to the cone and sphere.

Appendix, No. 3.

Scholarship Examinations.

Prizes at Entrance.

Geometry.—*Examiner, Professor Allman,* LL.D.

1. Given the three bisectors of the sides of a triangle; construct it.
2. Prove that the straight lines drawn from the extremities of the hypotenuse of a right-angled triangle to the angles of the squares described on the opposite sides intersect on the perpendicular let fall from the right angle on the hypotenuse.
3. Cut a line into two parts, so that the square on one of them shall be equal to five times the square on the other.
4. Given the base and vertical angle of a triangle, find the locus of the centre of the inscribed circle, and of the centres of the three escribed circles.
5. Describe a circle touching two given straight lines and a given circle.
6. Through a given point draw a straight line which shall be cut in a given ratio by the circumference of a given circle.
7. Given the three altitudes of a triangle; construct it.
8. Through a given point draw a straight line, so as to form with the sides of a given angle a triangle of given area.
9. Given the base of a triangle, and the ratio of either side to the perpendicular let fall on it from the opposite base angle; find the locus of the vertex.
10. Prove that in a circle the circumscribed regular polygon of $2n$ sides is a harmonic mean between the circumscribed one of n sides, and the inscribed one of $2n$ sides.

Engineering Scholarship—Third Year—October 31, 1868.

Mathematics.—*Examiner, Professor Allman,* LL.D.

1. Find the polar equation of a central conic section, the focus being pole.
2. Given four points on a conic, find the locus of its centre.
3. Given the base and the product of the tangents of the base angles of a triangle; find the locus of the vertex.
4. Differentiate:

$$(a+x)^m(b+x)^n\,;\ \log(\sin x)\,;\ \tan^{-1}\left(\frac{1-x}{1+x}\right)^{\frac{1}{2}}\,;\ x^x.$$

5. If $y=1+xe^y$; find $\frac{dy}{dx}$.
6. Cut the greatest parabola from a given right cone.
7. Prove that in any conic section the radius of curvature varies as the cube of the normal.
8. Integrate:

$$\frac{dx}{x^2-a^2}\,;\ \frac{dx}{x\sqrt{x^2-a^2}}\,;\ \frac{dx}{a\cos^2x+b\sin^2x}.$$

9. Find $\int dx e^{ax}\cos nx$ and $\int dx e^{ax}\sin nx$.
10. Determine the whole length of the curve $x^{\frac{2}{3}}+y^{\frac{2}{3}}=a^{\frac{2}{3}}$.

Mixed Mathematics.—*Examiner, Professor Curtis,* LL.D.

1. A cylinder open at the top stands on a horizontal plane, and a uniform rod rests partly within the cylinder, and in contact with it at its upper and lower edges; supposing that the weight of the cylinder is n times that of the rod, if r denote the radius of the cylinder, and α the inclination of the rod to the horizon, prove that the greatest length of the rod consistent with equilibrium is $2(n+2)r\sec\alpha$.
2. A heterogeneous rod rests with one extremity pressing against a rough horizontal plane, and the other pressing against a rough vertical wall, being given the coefficient of friction between the rod and each of these surfaces; find the position of equilibrium of the rod.
3. A heavy body being projected from a given point in a given direction, and with a given velocity; prove that it describes a parabola, and determine the position of the focus, and the vertex of its parabolic path.

4. A triangular plate rests in equilibrio in a liquid one angle, A, being situated in the horizontal surface of the liquid, another angle, B, being above this surface, and the third angle, C, below it. If l denote the specific gravity of the liquid, and s that of the plate, prove that

$$\frac{l}{s}=1+\frac{\tan C}{\tan B}.$$

5. Determine the *Centre of Pressure* of a square, the side of which is 3 feet and the opposite extremities of a diagonal of which are sunk in a liquid to depths of 10 and 13 feet, respectively; also the total pressure to which one face of the square is exposed, supposing the specific gravity of the liquid to be 1·15.

6. A thin double convex lens, the radii of whose surfaces are 8 and 10 inches, respectively, and whose index of refraction is μ, is surrounded by another medium, whose index of refraction is v; determine the relation between its conjugate foci, and apply your result to the case of a glass lens of the specified dimensions surrounded by water.

7. Explain the fact that for *near* objects a convex lens is of less use to a near sighted than to a far-sighted person, while for *distant* objects the reverse is the case.

8. Account for the apparent direct and retrograde motions, and the stationary positions of the planets. Explain also why some planets, but not all, exhibit discs.

EXPERIMENTAL PHYSICS.—*Examiner, Professor Curtis,* LL.D.

1. Establish the formula for graduating an areometer.

2. Explain the formula $f=f'-\cdot0114\frac{p-f'}{p}(t-t')$, by the aid of which the dew-point and degree of humidity of the air may be found.

3. Distinguish between *quantity of heat* and *temperature*, and give the formula for the total quantity of heat in steam.

4. How may the horizontal intensity of the earth's magnetic force be determined by means of the dip needle?

5. On the Franklinian theory of electricity, how can the repulsion of two negatively charged bodies be explained?

6. A magnetic needle free to revolve in a horizontal plane round an axis, dividing it into any two parts is acted on by an indefinitely long vertical galvanic current; find the condition that it should have positions of equilibrium, and determine them when they exist.

7. Describe some of the apparatus by which permanent rotation may be produced by a galvanic current:

(*a*) On a steel magnet.
(*b*) On an electro-magnet.
(*c*) On another galvanic current.

8. Describe the fundamental experiment, which proves the existence of a thermo-electric current.

SENIOR SCHOLARSHIP—METAPHYSICS, JURISPRUDENCE, AND POLITICAL ECONOMY.

METAPHYSICS.—*Examiner, Professor Moffett,* LL.D.

1. Write a notice, as if for a Dictionary of the History of Philosophy, of the philosophical doctrines of Descartes.

2. Compare Locke and Kant with respect to (*a*) the Origin and Reality of Knowledge; (*b*) the Moral Law.

3. Distinguish between the Psychological and Introspective Methods of Investigation.

4. Explain the various meanings attached to the phrase—Relativity of Human Knowledge.

5. How does Mill answer the objection to his theory of Mind—that it invalidates the evidence for the existence of our Fellow-Creatures, and for Immortality?

Appendix, No. 3.

Scholarship Examinations.

6. Give Hamilton's account of the functions and uses of the Faculty of Imagination.

7. State and criticize, after Mr. Mill, Hamilton's theory of the Law of Causation.

8. Give Hamilton's account of the Law of Parcimony. To what Logical principle does Mr. Mill reduce it? How does he criticize Hamilton's Metaphysical application of it?

9. Examine the theory of Unconscious Mental Modifications.

10. State Hamilton's theory of Pleasure and Pain, with Mr. Mill's criticism thereon.

11. State the views of Hamilton and Mill, respectively, with regard to the Freedom of the Will.

12. Explain Leibnitz's distinction of Intuitive and Symbolical Knowledge; and point out the error of Sir W. Hamilton in identifying this distinction with a well-known one of Kant's.

POLITICAL ECONOMY.—*Examiner, William Lupton,* M.A.

1. State the law of wages as depending on the proportion of capital to population.

If it were possible to keep this proportion constant, while population increased indefinitely, in what ways must the increase of capital take place?

2. What is Ricardo's theory of rent?

3. Explain how national wealth is increased by commerce—1st, between different parts of the same country; 2nd, between a country and its colonies; 3rd, between a country and foreign nations.

4. What advantages result from the division of labour? How does this connect itself with commerce? Point out the fallacy in the statement "That the wealth of a country cannot be increased by giving equal values for equal values."

5. Explain what is known as Mr. Wakefield's Colonization Scheme.

6. Should largely increased national expenditure be defrayed by loans or additional taxation? Justify your opinion.

7. State the arguments for and against the usury laws.

8. State and explain the Ricardian theory of profits.

9. What is meant by "Cost of Production"? In what sense is it true that the cost of production regulates the value of freely produced commodities?

10. "Securities + Bullion $\propto$ Deposits + Circulation."
"Bullion $\propto$ Deposits + Circulation."
"Bullion $\propto$ Circulation."
"Securities $\propto$ Deposits."

Point out the advantages and disadvantages of these several laws of circulation. Which is the principle of the Bank Charter Act?

11. Examine the effect of a bounty on the export of corn.

12. How do derangements in the Foreign Exchanges correct themselves?

13. "The course of Exchange at New York on London for bills at 60 days sight, was on the 30th November about 109⅜ per cent. At this rate there is no profit on the importation of gold from the United States."—(The "*Times*," December 2, 1868.) Explain this.

JURISPRUDENCE.—*Examiner, William Lupton,* M.A.

1. Explain the principle of "utility," as enunciated by Bentham. State and discuss the rival principles with which he contrasts it.

2. "The same punishments for the same offences." Examine this position.

3. What according to Austin are the respective functions of Jurisprudence and Legislation?

4. What is the characteristic difference between laws proper and laws improper? Into what classes does Austin divide them respectively, and how are these classes severally distinguished and related? In which class would you rank "Customary Law"?

5. Sketch the history of testamentary disposition at Rome, and point out whether, in your opinion, testamentary or intestate succession is the more ancient institution.

6. Mr. J. S. Mill says that "although the right of bequest or gift after death forms part of the idea of private property, the right of inheritance as distinguished from bequest does not." Examine this statement.

7. What were the Roman conceptions of "dominium," "occupatio," and "possessio?"

"Res nullius cedit occupanti." In connexion with this maxim trace the rise and progress of the right of property.

Can you mention any instance in English law in which mere occupancy conferred a title?

8. Sketch the modern history of the "Jus Naturale," and show how it has influenced the development of modern international law.

9. What, according to Austin, are the marks of an "independent political society"?

Test by a reference to these marks the sufficiency of the several definitions of "Sovereignty" given by Hobbes, Grotius, and Bentham.

10. Contrast the definitions of "civil liberty" given by Paley and Austin.

11. Trace the history of the law of treason from the statute of Edward III. till the close of the reign of George III.

12. Distinguish between "jura in rem" and "jura ad rem." In which class would you rank a covenant, a mortgage, a servitude, emphyteusis, respectively?

13. What is the difference between a felony and misdemeanor in English law?

14. Are the terms "legal and constitutional," "illegal and unconstitutional," equivalent?

15. What, according to Austin, are the three theories by which we are enabled to determine the unrevealed laws of God, and why is a knowledge of those theories important to a student of jurisprudence?

16. What is the plan of Mr. Maine's treatise on "ancient law"? To what extent do you conceive that it is based on sound principles?

Senior Scholarship—Modern Languages and History.

History.—*Examiner, Professor Moffett*, LL.D.

1. Lingard enumerates several innovations in judicial proceedings introduced by William the Conqueror. Mention these.

2. Give Lingard's account of the dispute regarding Investitures.

3. Give an account of the Constitutions of Clarendon.

4. How does Lingard refute the remarkable assertions of Ledwich regarding St. Patrick?

5. Explain "Tanistry" and "Gavelkind." How long did these usages continue in Ireland?

6. By what expedient was Richard I. enabled to raise the enormous sums of money required for his Crusade?

7. Give an account of William Fitzosbert.

8. "The only benefits which the nation received in return for the immense sums with which it had furnished Richard for his expedition to Palestine were two legislative Charters." What were these?

9. State the claims of the three principal aspirants to the throne of Scotland in the time of Edward I.

10. Who was Robert of Artois? How was he connected with the history of England?

11. Give some account of Pedro the Cruel. How was he connected with English history?

12. "Henry IV.," Lingard remarks, "advanced his pretensions to the throne *on an undefined claim of inheritance*." Explain this, give the several steps of the descent (both by father and mother) of Henry IV. from Henry III.

13. Lingard enumerates several particulars in which the authority of the House of Commons was increased in the reign of Henry IV.

14. Discuss the theory of the Abbé Dubos concerning the title of Clovis to reign in France.

Appendix, No. 3.

Scholarship Examinations.

15. To what causes does Hallam attribute the misfortunes of Louis le Débonnaire?

16. Give Hallam's account of the dissolution of the Carlovingian Empire after the deposition of Charles the Fat.

17. What account does Hallam give of the state of France at the accession of Hugh Capet?

18. What account does he give of the causes that led to the first Crusade?

19. Sketch the career and character of Louis IX.

20. Some French historians throw the blame of the rupture between England and France in 1368 on Edward III. How does Hallam defend him?

21. Give an account of the League denominated "of the Public Weal."

HISTORY AND LITERATURE.—*Examiner, Professor Moffett*, LL.D.

1. On what grounds has it been maintained that there were extensive German settlements in Britain long before the Anglo-Saxon conquests?

2. The most eminent modern historians have disputed the authenticity of the commonly received account of the Anglo-Saxon invasion. On what grounds?

3. How does it appear that the language spoken in Britain belonged to the *Cymric* dialect? How do you account for the *Erse* dialect in Ireland?

4. Give the substance of the remarks of Cæsar and Tacitus respecting the inhabitants and languages of Britain.

5. What causes, according to Marsh, have mainly produced the linguistic revolutions of Modern Europe?

6. Latham asserts that "the earlier the stage of a given language is, the greater the amount of its inflexional forms, and the converse." On what grounds does Marsh dispute this proposition?

7. Quote Marsh's observations respecting the versification and diction of Mrs. Barrett Browning.

8. Give the etymology of each of the following words:—Argosy, abominable, world, harvest, vermilion, the humanities (*i.e.*, the Classics), spice, exorbitant, Saxon, Angle.

9. Explain Euphuism, Euphemism, Assonance.

10. Give such an account of the social condition of England as can be gathered from the Prologue of the Canterbury Tales.

11. Give the meanings of the following words:—*Goliardeis, sausefleme, herbergh, lodemanage, achatour, mormal, manciple, yeddings, parvys, wastel, halives, purfiled.*

12. Describe "the six Counsellours of Lucifera."

13. Explain the following words and phrases:—*Buxom* air, *eyas* hawk, *housling* fire, *portesse, emboss.* It rightly *hot* the well of Life. He that *harrowed* Hell with heavy *Stoure.* Undoubted battle ready to *darrayne.*

14. Refer to, or quote if you can, those passages that you most admire in Shakespeare's *Julius Cæsar.*

15. The feeling of nationality is impressively embodied in some passages of *King John:* quote, or refer to the passages.

16. Two scenes of the Play—between John and Hubert—are said to be unsurpassed in dramatic effect: quote, or give the substance of these speeches.

17. Point out the anachronism in each of the following passages:—

a. "Such as she is in beauty, virtue, birth,
Is the young Dauphin every way complete."

b. "Have I not here the best cards for the game?"

c. "The thunder of my cannon shall be heard."

18. Give an account of the most important principles of the system of thought embodied in the Essay on Man;

or,

Give an account of the poetical merits of the work, quoting the most remarkable passages.

Senior Scholarship in Law.

Jurisprudence, Civil, Constitutional, and International Law.

Examiner, William Lupton, M.A.

1. Sketch the history of Testamentary disposition at Rome, and point out whatever, in your opinion, testamentary or intestate succession is the more ancient institution.

2. Mr. J. S. Mill says—"That although the right of bequest or gift after death forms part of the idea of private property, the right of inheritance as distinguished from bequest does not."

Examine this position.

3. What was the Roman conception of "dominium," "occupatio," "possessio."

"Res nullius cedit occupanti."

In connexion with this maxim, trace the rise and progress of the right of property.

4. Sketch the modern history of the "Jus Naturale," and show how it has influenced the development of modern international law.

5. "Nuda pactio obligationem non parit, sed parit exceptionem."

Explain and illustrate this maxim.

6. What, according to Austin, are the marks of an "independent political society?"

Test by a reference to these marks the sufficiency of the several definitions of "Sovereignty," given by Grotius, Bentham, and Hobbes.

7. Why are solemnities annexed by law to certain contracts? Give examples of such solemnities from Roman and English law.

8. Contrast the definition of Civil Liberty given by Paley and Austin.

9. Show that the Sovereign power is incapable of legal limitation.

Is there any inconsistency between this proposition and the maxim—"Rex non debet esse sub homine, sed sub Deo et sub Lege, quia rex facit legem?"

10. "Defendant appeared on a Habeas Corpus; Corbett, being an attorney, had at Browne's suit arrested a soldier without leave, and was committed to custody thereupon. Corbett was now discharged because the warrant was under the King's own hand, without seal, or the hand of any Secretary or Officer of State or Justice."—(Shower's Reports.)

What is the constitutional principle involved in this decision? Mention some remarkable cases in which that principle has been questioned, and say when it was finally established?

11. Trace the history of the law of Treason from the statute of Edward III. till the close of the reign of George III.

12. "*A* shooteth at the poultry of *B*, and by accident killeth a man; if his intention was to steal the poultry it will be murder, but if it was done wantonly and without that intention it was but barely manslaughter."—(Foster's Crown Law.)

What is the ground of this distinction?

13. Does the Law of Nations recognise any and what distinction as to the caption of private property in land and maritime warfare?

14. Sketch briefly the law of blockade.

15. Define domicile, and state what is *prima facie* the domicile of—1st, a widow; 2nd, a minor; 3rd, a merchant residing with his family, whose residence and place of business are separate; 4th, an ambassador.

16. Define "accessio," and explain the maxim "accessionem non ducit sed sequitur suum principale."

Upon what principle was compound interest (anatocismus) illegal at Rome?

Appendix, No. 3.

Scholarship Examinations.

Law Scholarship—Third Year.

Jurisprudence and Civil Law.—*Examiner, William Lupton,* M.A.

1. Define "accessio," and explain the maxim "accessionem non ducit sed sequitur suum principale."

Upon what principle was compound interest (anatocismus) illegal at Rome?

2. Define a "servitude," and distinguish real from personal servitudes. Are the lattér properly termed servitudes?

3. Define a "fidei-commissum." When did fidei-commissa arise, and how does their admission illustrate the way in which Roman law was developed?

4. "Nuda pactio obligationem non parit, sed parit exceptionem?"

Explain and illustrate this maxim.

5. Contrast the definitions of "Civil liberty" given by Paley and Austin.

6. "Ignorantia juris neminem excusat."

Upon what grounds does this maxim rest, and how is it justified by the Roman jurists?

7. "Eam (possessionem) enim rem facti non juris est." "Possessio non tantum corporis sed et juris est." What different views have been held as to the meaning of these passages, and how are they important in Roman jurisprudence?

8. Trace the history of the law of Treason from the statute of Edward III. till the close of the reign of George III.

9. "*A* shooteth at the poultry of *B*, and by accident killeth a man; if his intention was to steal the poultry it will be murder, but if it was done wantonly and without that intention it was but barely manslaughter."—(Foster's Crown Law.)

What is the ground of this distinction?

10. What was "occupatio" in Roman law? To what classes of things did it give ownership?

Can you give any case in English law in which occupancy conferred a title?

11. "Hereditas est successio in universum jus quod defunctus habuit."

Give an accurate explanation of this definition, and illustrate by reference to English law wherever you can find an appropriate analogue.

12. "All confiscations forming part of a sentence by which death is inflicted, are in my opinion founded on the greatest injustice."—(Sir S. Romilly.)

Examine this position.

Law Scholarship—Second Year.

Jurisprudence and Civil Law.—*Examiner, William Lupton,* M.A.

1. What is Bentham's classification of offences? Explain its merits and defects.

2. Explain the distinction between direct and indirect methods available for preventing crimes.

3. On what grounds may it be contended that a parent should be held responsible for the criminal acts of his child?

4. What are Bentham's views in relation to succession to property?

5. To what extent ought possession to be allowed as a defence to the claim of the rightful owner?

6. Enumerate the chief schools of jurisprudence in modern Europe, and mention the leading principles of each.

7. How does Austin distinguish between Free and Despotic Governments?

8. Why was the maxim "Consensus non concubitus, facit matrimonim," of pre-eminent importance in Roman law?

9. Explain the distinction between "natural" and "civil" modes of acquiring ownership. Enumerate the natural modes, and give examples of them, as well as of some of the civil modes.

10. Explain the meaning of "capitis deminutio," and enumerate its various forms.

11. Who were necessary heirs? Why was a slave of the testator occasionally named his heir?

12. What was the "Querela inofficiosi testamenti?" What is the English law as to inofficious wills?

13. How did the fiction of adoption find its way into jurisprudence?

14. What is the difference between a quasi and an implied contract? Give examples of each.

15. What were the Roman consensual contracts?

16. What is the meaning of "malice" in English criminal law?

17. Explain the difference between the English and French modes of criminal procedure.

Law Scholarship—First Year.

Jurisprudence.—*Examiner, William Lupton*, M.A.

1. Explain the principle of "utility" as enunciated by Bentham. State and discuss the rival principles with which he contrasts it.

2. How does Bentham estimate the value of a pleasure considered in itself and in relation to a single individual?

3. "It is with Governments as with medicine; its only business is the choice of evils. Every law is an evil, for every law is an infraction of liberty." Discuss this proposition.

4. What are the reasons for erecting certain acts into offences? Illustrate your argument by reference to the evils resulting from cupidity.

5. "The same punishments for the same offences." Examine this position.

6. What, according to Austin, are the respective functions of jurisprudence and legislation?

7. What are the essentials of a law properly so called? State and explain the notions involved in the term?

8. What is the characteristic difference between "laws proper" and "laws improper?" Into what classes does Austin divide them respectively, and how are those classes severally distinguished and related? In which class would you rank "customary law?"

9. Give examples of a conflict between the laws of God, positive law, and the rules of positive morality. What is the practical effect of such conflict?

10. According to Austin "determinate bodies" are of two kinds. What are the marks by which they are respectively distinguished? Give illustrative examples.

11. Explain the "Jus Gentium" and the "Jus Naturale" of the Roman lawyers, and show how they influenced the development of Roman jurisprudence.

12. What was the Roman family, and in what respects did it differ from the modern conception of the family?

13. Distinguish between Agnati, Cognati, and Gentiles, and show how the distinction is important in the law of intestate succession.

14. What are the Roman conceptions of "Dominium" and "Possessio"?

15. What were the "natural" modes of acquiring ownership? Give examples of each, and also of the "civil" modes of acquisition.

16. Distinguish between "Jura in rem" and "Jura ad rem." In which class would you rank a covenant, a mortgage, a servitude, emphyteusis, respectively.

Examination for Second Year's Medical Scholarships.

Experimental Physics.—*Examiner, Professor Curtis*, LL.D.

1. Distinguish between *stable*, *unstable*, and *neutral* equilibrium, and give an instance of each.

2. Two homogeneous rods, of lengths 3 feet and 4 feet, and weight 6 lbs. and 12 lbs., are supported each in a horizontal position by two vertical props at its two extremities; another homogeneous rod, whose length is 12 feet, and weight 18 lbs., is supported horizontally with its extremities resting each on the centre of one of the two other rods; find the pressure on each of the props.

Appendix, No. 3.

Scholarship Examinations.

3. Calculate the time in which a heavy body will slide down a smooth inclined plane, the length of which is 18 feet, and height 4 feet.

4. How would you determine the space occupied by the pores of a piece of sugar?

5. Give the formula which connects the *pressure*, *volume*, and *temperature* of a given weight of gas.

6. Distinguish between heating by *conduction* and *convection*, and give an instance of each.

7. A magnetic needle free to revolve in a horizontal plane being given, how would you determine whether a piece of steel be a magnet or not?

8. In exploding gunpowder by the discharge of a Leyden jar what precaution is necessary?

9. Describe the construction and use of a Voltameter.

10. In making an induction coil why is it necessary that the electro-magnet which works the Contact-breaker should be made of *soft* iron?

CHEMISTRY.—*Examiner, Professor Rowney,* PH.D.

1. What compounds are obtained when nitric acid acts upon metallic copper?
2. Describe the method of obtaining and the properties of nitrogen gas.
3. What is meant by the specific heat of a body?
4. How is hydrosulphuric acid obtained. State also its properties and uses.
5. What is meant by substitution?
6. How is hydrocyanic acid prepared?
7. What is meant by chemical affinity. State its principal characters.
8. State the reaction that takes place when iodide of potassium, binoxide of manganese, and sulphuric acid are heated together.
9. What are the tests for albumen?
10. How would you detect the presence of sugar in urine?
11. Write the rational and empirical formulæ for alcohol, ether, and acetic acid.
12. Mention the principal sources of heat?

FRENCH.—*Examiner (pro tempore), Professor D'Arcy Thompson.*

1. Translate:—

La révolution française, qui avait détruit l'ancien gouvernement, et bouleversé de fond en comble l'ancienne société, avait deux buts bien distincts, celui d'une constitution libre, et celui d'une civilisation plus perfectionnée. Les six années que nous venons de parcourir furent la recherche du gouvernement, de la part de chacune des classes qui composaient la nation française. Les privilégiés voulurent établir leur régime contre la cour et contre la bourgeoisie, par le maintien des ordres et des états généraux; la bourgeoisie voulut établir le sien contre les privilégiés et contre la multitude, par le code de 1791; et la multitude voulut établir le sien contre tout le monde, par la constitution de 1793. Aucun de ces gouvernements ne put se consolider, parce que tous furent exclusifs. Mais, pendant leurs essais, chaque classe, momentanément dominatrice, détruisit dans les classes plus élevées ce qu'il y avait d'intolérant et ce qui devait s'opposer à la marche de la nouvelle civilisation.

2. Translate:—

Joad. O mon fils, de ce nom j'ose encor vous nommer,
Souffrez cette tendresse, et pardonnez aux larmes
Que m'arrachent pour vous de trop justes alarmes;
Loin du trône nourri, de ce fatal honneur,
Hélas! vous ignorez le charme empoisonneur;
De l'absolu pouvoir vous ignorez l'ivresse,
Et des lâches flatteurs la voix enchanteresse.
Bientôt ils vous diront que les plus saintes lois,
Maîtresses du vil peuple, obéissent aux rois;

Qu'un roi n'a d'autre frein que sa volonté même ;
Qu'il doit immoler tout à sa grandeur suprême;
Qu'aux larmes, au travail, le peuple est condamné,
Et d'un sceptre de fer veut être gouverné ;
Que, s'il n'est opprimé, tôt ou tard il opprime.

3. (*a*) What two French philosophers flourished during the first half of the seventeenth century?

(*b*) Name the chief work or works of Boileau, Bossuet, J. J. Rousseau, Chateaubriand.

(*c*) Name the chief writers that have flourished since the revolution of 1830; state two names as, in your opinion, pre-eminent; and mention the chief works of the two.

4. Translate into French the following:—

(*a*) He is not jealous.
(*b*) He is of a jealous disposition.
(*c*) I have written one letter only.
(*d*) Here is the letter that he wrote.*
(*e*) Surrounded on all sides, they gave themselves up for lost, and were forced to surrender.
(*f*) Books are necessary for that purpose.
(*g*) Good books are necessary for that purpose.
(*h*) I have been waiting for you for the last hour.
(*i*) He has just arrived.
(*j*) Are these the thoughts that should occupy the heart of a noble youth? Consider how to support the reputation of thy father, and to conquer the fortune that persecutes thee. A youth that cares to adorn himself vainly is unworthy of glory. Glory is due only to the heart that can bear trouble and trample pleasures under foot.

* Past indefinite.

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For Her Majesty's Stationery Office.

REPORT

ON

THE CONDITION AND PROGRESS

OF THE

QUEEN'S UNIVERSITY IN IRELAND,

FOR THE YEAR 1868-69.

BY

THE RIGHT HON. SIR MAZIERE BRADY, BART.,
VICE-CHANCELLOR OF THE UNIVERSITY.

Presented to both Houses of Parliament by Command of Her Majesty.

DUBLIN:
PRINTED BY ALEXANDER THOM, 87 & 88, ABBEY-STREET,
FOR HER MAJESTY'S STATIONERY OFFICE.

1869.

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CONTENTS.

	Page
REPORT,	3
APPENDIX:	
I. Report of Public Meeting of the Queen's University in Ireland, held in St. Patrick's Hall, Dublin Castle, on 14th October, 1868,	5
II. Degrees, Certificates, and Honors,	12
III. Estimate of the Sum required to defray the Expenses of the Queen's University in Ireland for the year ended 31st March, 1869,	19
IV. Cash Account of the Queen's University, for the Year ended 31st March, 1869,	19
V. Meetings of the Senate,	20

REPORT.

TO HIS EXCELLENCY JOHN POYNTZ, EARL SPENCER, K.G.
LORD LIEUTENANT-GENERAL AND GENERAL GOVERNOR OF IRELAND.

Queen's University, Dublin Castle,
April 1, 1869.

May it please your Excellency,

In the absence of the Earl of Clarendon, Chancellor of the Queen's University in Ireland, it becomes my duty as Vice-Chancellor, in compliance with the provisions of Her Majesty's Charter, to furnish to your Excellency the Report of the Condition and Progress of the University since the 1st April, 1868.

The General University Examinations during the period of this Report commenced on the 29th of September, and terminated on the 26th of October, 1868. Examinations for Degrees in the Faculty of Medicine were also held in June, and First University Examinations in Arts and Engineering were also held in April. At these various Examinations 440* Candidates presented themselves. Lists of those who were successful are annexed, and a List of the Students Matriculated in the University since the first of October last. App. II.

In addition to these Examinations for Members of the University, Examinations of Candidates who are not Members were held in the month of June. Lists of those who were successful are annexed. App. II.

The principal public meeting of the University, to confer degrees and diplomas, and distribute prizes, and which your Excellency's

* In this number the same persons are counted twice wherever they underwent two distinct University Examinations within the year. This happened in 124 cases, so that the number of individuals examined was 316.

predecessor was pleased to honour with his presence, was held in
App. I. St. Patrick's Hall, Dublin Castle, on the 14th of October last. An account of the proceedings is appended to this Report.

The following papers are also annexed for your Excellency's information.

App. III. The Estimate for the year.

App. IV. The Cash Account for the year.

App. V. A Return of the several Meetings of the Senate since my last Report.

I have the honour to be,

Your Excellency's

Obedient and faithful Servant,

MAZIERE BRADY,

Vice-Chancellor.

APPENDIX.

Appendix I.

Public Meeting of the Queen's University in Ireland, held in St. Patrick's Hall, Dublin Castle, on the 14th October, 1868.

Public Meeting.

After the close of the examinations of the year 1868, a public meeting of the Queen's University was held in Dublin Castle on the 14th October, 1868, for conferring degrees, diplomas, and prizes.

A large number of distinguished persons having taken their places in the Examination Hall, the Vice-Chancellor and Senate of the University, the Professors and Examiners and the Candidates, entered it in procession.

The Vice-Chancellor opened the meeting with the following address:—

At this our annual meeting to confer the degrees and honours of the Queen's University, I have the satisfaction of announcing that the number of candidates for the examination of the past collegiate year exceeds that of its immediate predecessor. The total number of individual students who attended the examinations in the year now concluded has been 316. The corresponding number in 1867 was 305. Of these candidates 52 out of 72, who were examined for the degree of Doctor of Medicine, have been successful, 32 of whom were admitted to their degrees in the month of June last, and the remaining 20 are to be admitted to-day. Twenty-two of the number have also attained to the degree of Master in Surgery. Seventy-four medical students, out of a total number of 119 candidates, have passed the first examination in that faculty, and will, I hope, become successful candidates for their degree in a future year. Nineteen Bachelors of Art out of 20 examined have been declared entitled to the degree of Master, and 46 students out of 50 candidates for the degree of Bachelor of Arts, have successfully passed the examination; and at the first examination in Arts 50 students were successful out of 88 who presented themselves to the examiners.

The Senate of the University, for the greater encouragement of the study of engineering, and to give to the successful students in that most valuable branch of collegiate pursuits a more strictly academic designation, have substituted degrees for the diploma we have heretofore conferred. The degree of Bachelor in Engineering will, therefore, be given to-day to those whose answering at the recent examination would have entitled them to the University diploma; they are eight in number, out of ten candidates. The first examination in Engineering some time ago instituted by the Senate has been successfully passed by ten out of seventeen students. *Ad eundem* Degrees of LL.D. have been granted to Sir Robert Kane, T.C.D., and to the Rev. Christopher M'Cready, M.A., T.C.D. The prizes founded by means of the contributions of Sir Robert Peel, and of those who responded to his appeal, have been successfully competed for, while the medals and prizes proposed to be given by the Senate in the various classes into which our University examinations are divided have been awarded by the examiners to a very large number of those now before us, thus testifying, and, I have no doubt, most deservedly, to the diligence and ability of the successful competitors. The continuous progress of our institution is not merely exhibited in the internal successes of the collegiate students; as in former academic years, so in the course of that we have just terminated, many students and graduates of

Appendix. I. Public Meeting.

the University have eminently distinguished themselves in the ranks of competition for employment in various departments of the public service. I have on former occasions alluded particularly to individuals so distinguished, and on this I am, happily, enabled to lay before the present assembly a very ample list of students from the Queen's Colleges who have so profited by the education there given to them most usefully to themselves, and, I may add, most beneficially to the public services, to which they have devoted themselves :—

Indian Civil Service.—Three candidates have been successful, one from each college. Mr. Thomas Horan, only a second year's student in Cork, obtained the highest number of marks in mathematics this year—indeed I believe the highest ever obtained. He will be examined next week for his first university examination in arts, and I hope will be able to take his degree next year before he goes to India. The second is Mr. James Monteath, of Queen's College, Belfast, who takes to-day his degree of M.A., with honours; and the third is Mr. Colman Macaulay, of Queen's College, Galway, who takes also, with honours, the same degree to-day. Mr. W. M'Laren Smith, M.A., of Queen's College, Belfast, who obtained the highest number in mathematics in the competition of 1863, has been appointed Professor of Mathematics in the College of Berhampore.

Consular Service in the East.—James Newsome, M.A., Belfast, took 1st place at the competition ; John O'Driscoll, Cork, 3rd place at the competition ; John C. Hall, B.A., Belfast, was also successful. Mr. John M'L. Browne, a Queen's College student, who entered this service in 1861, is now First Secretary to the "Chinese Embassy to the Treaty Powers." He has taken advantage of his visit to Europe to take his degree of B.A., which he does to-day. Robert Jamieson, M.A., of Queen's College, Cork, who won an interpretership a few years ago, has been appointed First Professor of Mathematics in the Imperial College, Pekin. Michael O'Brien, B.A., of Queen's College, Cork, another "Interpreter," has been appointed First Professor of English Literature in the same college.

Public Works Department of India.—In this year's competition there were 65 candidates and 22 appointments. Of these Irish students obtained seven—three from Cork, three from Galway, and one from Trinity College, Dublin. Mr. Unkles, of Cork, 5th place ; Mr. Lynam, of Galway, 6th place ; Mr. Nightingale, of Galway (who is now taking his degree of Bachelor in Engineering), 7th place ; Mr. Bayly, of T.C.D., 9th place ; Mr. Richard, of Cork, 13th place ; Mr. Burke, of Cork, 16th place ; Mr. Hughes, of Galway, 21st place.

Mr. J. T. Bottomley, a highly distinguished graduate of Queen's College, Belfast (M.A.) has had the high honour to be selected for the post of Demonstrator of Chemistry in King's College, London, a post which can only be held by a man of considerable scientific ability and acquirements.

Mr. Alexander Hamilton, B.A., Belfast, and Mr. John M'Callum, B.A., Belfast, have obtained, on competitive examinations, the appointments of Inspectors of National Schools in Ireland.

Mr. Chambers, M.A., Belfast, has been appointed Head Classical Master of the Royal Academical Institution of Derry ; Mr. W. H. Dodd, M.A., Belfast, Head Master of the Endowed School of Bangor ; and Mr. T. G. Houston, Belfast, Head Master of Cookstown Academy. Mr. John Park, M.A., Belfast, has been appointed by his Grace the Lord Lieutenant Professor of Logic and Metaphysics in the Queen's College, Belfast, on the resignation of the very eminent and distinguished Professor M'Cosh. R. S. Stevelly, B.A., Belfast, has been appointed Mathematical Master, Aldenham School, Watford.

A great number of our medical graduates (I believe upwards of 20),

from all the colleges, have obtained appointments, by competition, in the army and navy medical services. Among them, Dr. Chatterton, of Queen's College, Cork (who took his degree of M.D. last June), has taken first place at this year's competition. Dr. Corbett, another Cork graduate, who took his degree of M.D. last year, took this year the first place at the further examination in this service, after having studied at Netley.

James H. Martin, an engineering student, of Belfast, has been appointed Engineering Superintendent on a sugar plantation in Demerara. These sugar plantations, I am informed, are under the level of the sea, and require large hydraulic works, in addition to those appropriate to the sugar manufacture. The last engineer who went from the Queen's College to Demerara has just got promotion in the service, sooner than is usual.

There are also to be recorded various other minor competitive successes.

These numerical and general statements constitute in themselves all that is necessary, I should say, in the way of comment on, or eulogy of the instruction given in the Queen's Colleges, by their eminent professors, and the diligence and ability of the students who have been prepared therein for the several university and public distinctions to which they have attained. I have but to add that, in the three colleges, the total number of students attending their several classes in the past collegiate year has been 762; a number not equal to those of a few former years, yet exceeding that of the year 1866. Of this number 210 are members of the Established Church, 181 are Roman Catholics, 274 are Presbyterians, and 97 belong to other religious denominations. The various questions regarding public and university education, to which I alluded when we last met in this hall, have since undergone varied discussion, but much remains undecided, and propositions regarding compulsory and middle-class instruction, the expansion of the systems and practice of other universities, and the regulation of intermediate scholastic institutions will, no doubt, engage legislative attention in the coming session of Parliament, and must be affected more or less beneficially by the recent extensive changes in the constitution of the constituency of the empire: with these discussions as regards the English institutions we have not much practical concern, but it is to be hoped that by some well-digested plan provision may be made for the organization of an improved system of intermediate education in Ireland, the want of which, in order to the better training and early preparation of students for our colleges, has long been felt and complained of.

At our annual meeting in the year 1858 I referred to the report of the Commission of Inquiry into the state of the endowed schools in Ireland, then recently presented to Parliament, their numbers, the funds destined to their support, and the nature and extent of the instruction given in them. A similar commission, which was issued in the year 1864 for a like inquiry into the endowed schools in England, has lately presented a most voluminous report, pointing out the modes in which, in the opinion of the Commissioners, those institutions (which are very numerous) may be made available to the diffusion of sound and safe education among the middle classes. The subject, therefore, has been thoroughly examined into and considered in all its branches, and it deserves the attention of every statesman. Let us hope that from these inquiries good results may be attained for the furtherance and improvement of the education of many classes who are now destitute of adequate means and suitable opportunities for the pursuit of studies appropriate to their condition and objects in life, and introductory to their progress in academic, collegiate, or generally useful learning.

Appendix.
I.
Public Meeting.

I have now but to discharge, in the absence of our Chancellor, the Earl of Clarendon, my function of admitting the candidates to their respective degrees. His Grace the Lord Lieutenant has, as on a former occasion, most kindly assented to our request that he would personally distribute our medals and prizes to those who have successfully competed for those honours.

The degrees, honours, and certificates were then distributed to the successful candidates.

After the degrees and prizes had been conferred, the VICE-CHANCELLOR again rose and said—

The Senate of the University, the Presidents, Vice-Presidents, Professors, the Students of the Queen's Colleges, desire through me to tender to your Grace their grateful acknowledgments of the honour you have conferred upon them by your Grace's attendance at this meeting, and the part you have taken in their proceedings, and their deep sense of your kindness in again permitting this magnificent hall to be thus occupied. It is to me a high gratification to be enabled to discharge this pleasing duty. In their names and my own, therefore, I take leave to present to your Grace our warmest thanks. The course of the University and of the colleges has not been distinguished in the past year by any important event. They have but pursued, to the best of their ability, the even tenor of their way; and the year's examinations have presented what they trust your Grace will consider an important and encouraging result—gratifying, we would hope, alike in his public capacity to the representative of our gracious Sovereign in the administration of the affairs of Ireland, as personally to a nobleman anxious for the progress of education, and solicitous for the advancement and prosperity of the country with which he is so closely and influentially connected; and we regard the honour you have now for the third time so kindly conferred upon our meeting as a sure evidence of your Grace's continuing interest in the fortunes and progress of the Queen's University and its associated colleges.

His Grace the DUKE of ABERCORN then rose and said—

Mr. Vice-Chancellor and gentlemen, I return you my thanks with pleasure and gratitude for the compliment which, on behalf of the Senate, you have so obligingly conferred on me. It is a source to me of additional gratification to have the privilege, as has been remarked by the Vice-Chancellor, of now for the third time assisting on these interesting occasions, and of meeting again the learned and distinguished body which annually presides in these halls over those important functions which exercise so great an influence for good over the rising talent and the intellectual energy of the youth of this island. I have said so large an influence for good over the youth of this island, for, assembled as we are in these stately halls—surrounded, as we are rather, at the present moment, by the emblems of luxury, by the impersonations of refinement, and the graces of female society—surrounded, I say, as we are by these, rather than by the sterner emblems of learning, we can hardly realize the unwearied industry, the midnight toil, the days of labour, and the nights of thought which are required for the culmination of such results as those which examinations of this nature bring forth.

The prizes and distinctions, for the conferring of which on those who gained them one short half hour sufficed, bear a much wider and more extended significance than the mere ceremony of conferring them would indicate. They bear the significance and impress of energy, and perseverance, and genius, which in after days may be found competent to do good

service to the State, to increase its intellectual renown or add to its national advantage.

Those elements which go towards forming that combination of energy, of perseverance, and of talent—a combination necessary for the successful result of a hard-fought academical career—are precisely the qualities from which, in afterlife, may arise the distinguished statesman, the profound lawyer, the deep read theologian—even, I may say, the glorious and successful soldier. And therefore it is that we and the public (as these brilliant assemblies annually testify) take a wider and more extended interest in these examinations than even the individual merits or successes of candidates, however talented, could arouse; an interest, I may say, akin to that with which in bygone days of ancient Greece the whole population looked down with eagerness upon the arena in which the youth of their State—their hope of strength in war, and of wisdom in the Senate—exhibited their qualities of endurance, of valour, or of skill, in their hard-fought Olympian games. In like manner I say we, in these more peaceful, but perhaps not less difficult contests, which are decided in these halls, recognise and appreciate those qualities which (where the youth is father to the man) may yet be found eminent in their country's service, may wield the thunders of the State, or direct its legal or theological destinies.

But whilst distinctions such as those to which I have alluded may in the course of events be in store for some of those whom I see around me, I will now refer briefly to the actual successes which have attended the alumni of this institution.

I have gone through the lists of the graduates and undergraduates of the Queen's University with some care, and I am both pleased and surprised to find the number of triumphs it has won in every department. Since its incorporation in 1850, twenty-four of its students have fought their way to the civil service of India and Ceylon; fourteen have by competition entered the Royal Engineers, and other engineering departments of the public service; sixty-four have received appointments in the army and navy medical service, by competition; and, since the establishment of the law scholarships in the English Inns of Court, the Queen's University of Ireland has three times carried them away. In addition to those which have been partly enumerated by the Vice-Chancellor, I understand that in the present year there were thirty or forty appointments gained in the same way which are not in the printed calendar of 1868.

These are successes of which you may indeed be proud, and which should stimulate the young men around me to still further exertions. They speak eloquently of the excellence of your system, and of the ability of your professors, who have so well carried it out. But, gentlemen, while such are the internal success and vigour of your institution, I regret that that which would externally give it additional lustre and distinction—I mean a habitation suited to its dignified requirements—is still wanting. I acknowledge that I myself feel some shame that I, like my predecessors in this place, held out hopes that as yet we have not been able to realize; but I may say that, though the subject has been unavoidably delayed, it has by no means been forgotten or set aside, and that it is by no means impossible that the delay may be more than compensated for by the fitness and completeness of the ultimate fulfilment of the object in view.

And now, to turn to the general educational principles of your institution, I must congratulate you upon being members of the University of which it may truly be said, in the language of the author of "The History and Philosophy of the Inductive Sciences," "it is one of the golden links which connect the permanent with the progressive."

The principal educational feature in your system seems to be this: two

Appendix. I. Public Meeting.

years are devoted to classics and mathematics, up to that mysterious and, in some of the Universities, occasionally untoward process called the "Little go." After that the student, if he be not an honorman, is somewhat restricted in his choice of subjects for examination. But if he be an honorman he is free to devote himself to such subjects as he is best determined towards by the bent of his own genius, or by his choice of a profession in life. I confess this system seems to me both wise and sound. I know there are many eminent authorities who would be against me: but I am old-fashioned enough to think that classics and mathematics, wisely taught, form the best basis for the higher education of the young. I think that, looking to the narrowing influence which a special professional education has upon afterlife, a young man is best educated, up to a certain point in his career, not as a lawyer or an engineer, not as an architect or a physician, but solely and simply as a man; and that he should bring to his after career in life faculties broadened and strengthened by that general discipline in life which experience has proved to be most efficacious. But after this point I would plead for ample freedom for individual taste. There could not be an intellectual tyranny more senseless than one which would condemn an Owen or a Murchison to four years of Greek iambics, or a Moore or a Tennyson to four years of mathematics. I believe these studies, carried to excess, are apt even to be pernicious, and to debilitate the mind by forcing it to produce a single fruitage. It has been well said of exclusive mathematical training that it acts as a spring tending in one uniform direction.

But, gentlemen, as the eye rolls over the wide field covered by your examination papers, one sees how wise and how judicious is the arrangement there displayed. Classics and mathematics indeed are there, as well as the natural and experimental sciences; but side by side are logic and metaphysics; and I am also glad to see that foreign languages hold their proper place—those languages of which Arnold said that ignorance of them and of their literature was only less disgraceful than ignorance of our own. Dante, Goethe, and Victor Hugo stand in your examination books side by side with Virgil and Sophocles; and I also rejoice to see that English literature and English classical works hold their fitting place, and that Milton and Shakespeare are honoured as they deserve. It has been said of some of your own national poetry and prose, that the poetry of your own Anacreon, Moore, as to whom it might be written, as it was of his brother bard of old—

> "Nec si quid olim lusit Anacreon
> Delevit ætas; spirat adhuc amor;"

and even the prose of Burke show some national defects. If such be the case, the study of some of the best models will act as a corrective, and tend to form among us a style neither hard nor meagre—neither feeble nor florid.

But I must turn from these subjects to that which more especially interests us on the present occasion—I mean the academic victories that have been gained during the examinations which we have just reviewed. Those who have gained prizes and distinctions, while I congratulate them most heartily on their successes, I would entreat to press forward, and not rest upon their academic laurels. I would urge upon all of you to use well these, the golden hours of your life. You cannot all of you make your intellect to your will, nor regulate all the chances that may hereafter be given you of developing its powers in the most favourable direction; but you can all, by honest industry, take it from these halls fitted for those purposes for which it is claimed by your parents, your country, and your God. We must all rejoice to see the ample proofs that

are around us that the stream of liberal education is advancing. The day was when it needed a careful and fostering hand to encourage its course, but it now realizes that beautiful image in which Homer, in all his marvellous music and wealth of colouring. describes the stream which, conducted by the gardener a while, at last, by its ample flow, glides past and beyond him—

Το δε τ' ὠκα κατειβομένον κελαρυζε.
Χώρω ενι προαλει φθανει δε τε κάι τον αγοντα.

With every hope and wish that this stream may bear you on in the course of virtue, of happiness, and of success, I bid you farewell.

The proceedings having terminated, the Lord Lieutenant and the Vice-regal party withdrew.

Appendix.

II. Degrees, Certificates, and Honors, 1868.

Appendix II.

Degrees, Diplomas, Certificates, &c., conferred in 1868.

The names in each class are arranged alphabetically.

Degrees.

The Degree of LL.D.

Sir Robert Kane, LL.D., University of Dublin, *ad eundem.*
Owen Connellan, LL.D., *Honoris Causâ.*
William Ross Hamilton, LL.B., Belfast.

The Degree of M.D.

FIRST CLASS.

Names.	College.
Hudson, Robert S., . .	Belfast.

SECOND CLASS.

[None.]

THIRD CLASS.

Price, William, . . .	Belfast.

UNCLASSED.

Barker, Frederick C., .	Belfast.
Beamish, Jas. Maybury, M.A.	Cork.
Beck, John Fritz, M.A., .	Belfast.
Brown, John M'Mahon, .	Cork.
Chambers, John, . .	Belfast.
Chatterton, James, B.A , .	Cork.
Coghlan, W. Boyle, . .	Cork.
Crowley, Timothy, . .	Cork.
Delmege, Alfred G., . .	Galway.
Donovan, Humphrey J., B.A.,	Cork.
Donovan, John, . . .	Cork.
Dunlop, James, . . .	Belfast.
Fleming, Robert Gage, .	Belfast.
Fox, James Thornley, .	Cork.
Hadley, G. Percival, . .	Belfast.
Harrington, Denis, . .	Cork.
Hegarty, Andrew, . .	Belfast.
Higgins, Thomas James, .	Belfast.
Hunter, Robert L., . .	Belfast.
Jamieson, R. Alexander, M.A.,	Cork.
Lloyd, John, . . .	Cork.
Longworth, Peter, . .	Galway.
Love, James, B.A., . .	Belfast.
Lumsden, Thomas, . .	Cork.
M'Auliffe, T. Brown, . .	Galway.
M'Carthy, Edward, . .	Cork.
M'Mordie, William K., .	Belfast.
Madden, Henry Murray, .	Galway.
Martin, John W., . .	Galway.
Mowll, Richard A., . .	Cork.
Mullen, St. Laurence, . .	Galway.
Murphy, Michael Edward, .	Galway.
Murphy, Patrick, . .	Cork.
Murray, Charles F. K., .	Galway.
Newsam, William Forbes, .	Cork.
O'Brien, Richard Rice, .	Cork.
O'Malley, Michael, . .	Cork.
Peterson, Richard A., .	Galway.
Price, Gordon, . . .	Belfast.
Ross, James A., . . .	Galway.
Saunderson, Wm. Henry, M.A.,	Galway.
Sugars, John Colvan, . .	Galway.
Stevenson, Robert Henry, .	Belfast.
Stewart, Robert William, .	Belfast.
Tate, Davis Dederick, .	Galway.
Walsh, Patrick Lynch, .	Cork.

The Degree of M.A.

FIRST CLASS.

Honors of the First Rank have been awarded to—

Charles, John J., .	In Experimental Science and Natural Science, ...	Belfast.
MacDonald, Francis, .	In English, History, and Political Economy,	Galway.
Rentoul, J. Laurence, .	In English, History, and Political Economy,	Belfast.
Rogers, William, . .	In Logic, Metaphysics, and Pol. Economy,	Belfast.

SECOND CLASS.

Honors of the Second Rank have been awarded to—

Names.		College.
Anglin, Arthur H.,	In Mathematical Science,	Cork.
Clancy, John J.,	In Ancient Classics,	Galway.
Macaulay, Colman P.,	In Ancient Classics,	Galway.
Monteath, James,	In Logic, Metaphysics, and Pol. Economy,	Belfast.
Moore, William,	In Modern Languages,	Belfast.
Wylie, James O.,	In Mathematical Science,	Belfast.

THIRD CLASS.

Honors of the Third Rank have been awarded to—

Greer, Thomas,	In Natural Science,	Belfast.
Johnston, William M.,	In History, Logic, and Metaphysics,	Galway.
Killen, James B.,	In Logic, Metaphysics, and Pol. Economy,	Galway.
M'Mordie, Hans,	In Logic, Metaphysics, and Pol. Economy,	Belfast.
M'Swinney, Robert F.,	In Metaphysics, History, and Pol. Econ.,	Galway.
Martin, James,	In Experimental Science,	Belfast.
Wylie, Robert B.,	In Logic, Metaphysics, and Pol. Economy,	Belfast.

UNCLASSED.

Johnston, James,	Belfast.
M'Caul, Robert A.,	Galway & Belfast.
M'Cready, Christopher, M.A.,	University of Dublin, *ad eundem*.

The Degree of M.CH.

Names.	College.
Beamish, Jas. Maybury, M.A.,	Cork.
Beck, John Fritz, M.A.,	Belfast.
Chambers, John,	Belfast.
Chatterton, James, B.A.,	Cork.
Dickson, James Reid, M.D.,	Belfast.
Donovan, John,	Cork.
Hudson, Robert S.,	Belfast.
Lloyd, John,	Cork.
M'Auliffe, T. Browne,	Galway.
Martin, John W.,	Galway.
Mowll, Richard Alfred,	Cork.
Mullen, St. Lawrence,	Galway.
Murphy, Patrick, M.D.,	Cork.
O'Brien, Richd. Rice, M.D.,	Cork.
Price, William,	Belfast.
Price, Gordon,	Belfast.
Purcell, Charles Gore, M.D.,	Cork.
Robinson, Wm. Newman, M.D.,	Cork.
Saunderson, Wm. Henry, M.A.,	Galway.
Sugars, John Colvan,	Galway.
Sharpe, William, M.D.,	Galway and Belfast.
Walsh, Patrick Lynch,	Cork.

The Degree of LL.B.

FIRST CLASS.

Killen, James B.,	Galway.

The Degree of B.A.

FIRST CLASS.

Honors of the First Rank have been awarded to—

Names.		College.
Agnew, Samuel,	In Experimental Science,	Galway.
Cowan, James,	In Ancient Classics,	Belfast.
Hamilton, Samuel M.,	In Logic, Metaphysics, and Pol. Economy,	Belfast.
Huey, John,	In Experimental Science,	Galway.
Kirkpatrick, William T.	In English, History, and Metaphysics,	Belfast.
O'Brien, Joseph,	In Ancient Classics,	Cork.
Prenter, Samuel,	In Logic, Metaphysics, and Pol. Economy,	Belfast.
Young, John,	In Mathematical Science,	Belfast.

SECOND CLASS.

Honors of the Second Rank have been awarded to—

Aston, John C.,	In Modern Languages,	Belfast.
Eaton, Thomas,	In Logic, Metaphysics, and Pol. Economy,	Galway.
Fitzpatrick, John,	In Logic, Metaphysics, and Pol. Economy,	Galway.
Haines, Charles H.	In Experimental Science,	Cork.
Hamilton, John S.	In English, Logic, and Metaphysics,	Belfast.

Appendix.

II.

Degrees, Certificates, and Honors, 1868.

Names.		College.
Hamilton, William W.	In Natural Science,	Belfast.
Henry, Richard,	In Natural Science,	Cork.
Hoey, William,	In Ancient Classics, and Third Rank in Modern Languages,	Belfast.
Quinton, Richard F.,	In Ancient Classics,	Belfast.
Taylor, David A.	In Logic, Metaphysics, and Pol. Economy,	Belfast.

THIRD CLASS.

Honors of the Third Rank have been awarded to—

Daly, Maurice C.,	In Modern Languages,	Cork.
Dewar, James,	In Logic, Metaphysics, and Pol. Economy,	Belfast.
MacDonald, Charles J.,	In Ancient Classics,	Galway.
M'Ilveen, John,	In Logic, Metaphysics, and Pol. Economy,	Galway.
Martin, Daniel N.	In Experimental Science,	Cork.
Meeke, Moses,	In English, History, and Pol. Economy,	Belfast.
Meharry, John B.,	In History, Logic, and Metaphysics,	Belfast.
Stewart, Samuel E.,	In English, Logic, and Metaphysics,	Belfast.

UNCLASSED.

Names.	College.	Names.	College.
Allen, Robert,	Cork.	Irvine, William,	Belfast.
Bodel, James,	Belfast.	Johnston, Robert J. E.	Belfast.
Bourke, Matthew J.,	Cork.	Longford, Joseph H.,	Belfast.
Brown, J. M'Leavy,	Belfast.	M'Knight, Roger B.,	Belfast.
Carey, Patrick,	Galway.	Millar, James,	Belfast.
Cleland, Thomas,	Belfast.	Miskelly, James,	Belfast.
Colvin, William,	Belfast.	O'Connor, Bernard,	Cork.
Crookshank, Charles H.,	Cork.	Pyper, James,	Belfast.
Gillman, Thomas H.,	Cork.	Torrens, Hugh R.,	Belfast.
Greer, John,	Belfast.	Wilson, John,	Belfast.

The Degree of Bachelor in Engineering.

FIRST CLASS.

Martin, James H.,	Belfast.
Oram, John E.,	Galway.

SECOND CLASS.

Millar, John B.,	Belfast.

THIRD CLASS.

Kane, Roderick W.,	Cork.

UNCLASSED.

M'Mordie, David,	Belfast.
Mercer, Thomas,	Belfast.
Thompson, Robert A.,	Cork.

First University Examination in Medicine.

FIRST CLASS.

Honors of the First Rank have been awarded to—

Alexander, William,	Belfast.
Johnston, William,	Galway.
Pye, Joseph P.,	Galway.

SECOND CLASS.

[None.]

THIRD CLASS.

[None.]

UNCLASSED.

Names.	College.
Agnew, Samuel,	Galway.
Armstrong, Thomas M.,	—
Barry, Robert,	Cork.
Beamish, Jas. Maybury, M.A.,	Cork.
Black, Moses,	Belfast.
Browne, J. Martin,	Galway.
Browne, Samuel Hazlett,	Belfast.
Clayton, Nicholas G.,	Galway.
Colahan, William H. W.,	Galway.
Cullinan, Michael,	Cork.
Coulter, William,	Belfast.
Daly, George W.,	Belfast.
Davis, Richard,	Belfast.
Davison, James,	Belfast.
Donnelly, Thomas J.,	Belfast.
Dick, Andrew,	Belfast.
Douglas, William,	Belfast.
Doyle, Patrick,	Belfast.
Enright, J. Francis,	Cork.
Exham, Richard,	Cork.
Frier, William,	Belfast.
Furey, James,	Belfast.
Given, Geo. Kilpatrick,	Belfast & Galway.
Hastings, William J.,	Cork.
Hawkes, Samuel,	Cork.
Hayes, John Roche,	Cork.
Heap, Charles Sidney,	Belfast.
Hegarty, George P.,	Galway.
Heron, Samuel,	Belfast.
Holland, James P.,	Cork.
Irvine, William,	Belfast.
Jameson, J. Alexander, M.A.,	Cork.
Johnson, Samuel,	Belfast.
Kearney, Michael,	Cork.
Lloyd, Christopher,	Cork.
Love, James, B.A.,	Belfast.
M'Carthy, Edward,	Cork.
M'Donnell, William,	Galway.
Mackenzie, Matt. B., B.A.,	Belfast.
M'Craith, Jeremiah,	Cork.
Martin, Daniel N.,	Cork.
Maunsell, John,	Belfast.
Millar, Alexander P.,	Belfast.
Moorhead, Wm. R., M.A.,	Galway & Belfast.
Murray, Charles F. R.,	Galway.
Murray, William W.,	Belfast.
Norris, Edward Henry,	Galway.
O'Connor, R. Watkins,	Cork.
O'Connor, Augustine D.,	Cork.
O'Neill, John,	Cork.
O'Reilly, Walter W. J.,	—
O'Sullivan, Thomas,	Galway.
Pierce, Frederick M.,	Belfast
Rea, John Henry,	Belfast.
Ritchie, William,	Belfast.
Shaw, James,	Belfast.
Simms, James,	Belfast.
Smith, Samuel J.,	Belfast.
Smyth, William J.,	Belfast & Galway.
Spence, James Beveridge,	Galway.
Smyth, Frederick Henry,	Cork.
Sweetnam, J. Long,	Cork.
Sweetnam, William F.,	Cork.
Torrens, James, M.A.,	Belfast & Galway.
Young, Alexander,	Belfast.
Young, Samuel, B.A.,	Belfast & Cork.
Williams, William,	Galway.
Watson, J. Woodrow,	Belfast.

Prizes founded by Public Subscription.

Prizes in Composition, open to the competition of Graduates and Undergraduates.

First Prize.—Essay signed "Pandulfo de Guido."

Maguire, T., B.A., ... Galway.

Second Prize.—Essay signed "Carlotta M'Arthur."

MacSwinney, Robert F., M.A., ... Galway.

Prizes in Composition, open to the competition of all Undergraduates.

Prize in English Composition.—Essay signed "Tamerlane."

Kirkpatrick, William T., ... Belfast.

Prize in Latin Composition.—Essay signed "Cicero Reflorescens."

Mulligan, J., ... Belfast.

Prize in Composition, limited to the competition of Undergraduates in Medicine.

Essay signed "Dum spiro spero."

Charles, Thomas W., ... Belfast.

Appendix.

II.

Degrees, Certificates, and Honors, 1868.

EXHIBITIONS AWARDED AT THE FIRST UNIVERSITY EXAMINATION IN MEDICINE.

Alexander, William, of Queen's College, Belfast. First in the non-professional Subjects of Examination; two instalments of £20 each.

Pye, Joseph P., of Queen's College, Galway, Second in the non-professional Subjects of Examination; two instalments of £15 each.

PRIZES AWARDED AT ENTRANCE EXAMINATION.

Names.	*October*, 1868.	College.
Blyth, William D.,	First in English Composition,	Cork.
Houston, J. D. Craig,	First in English Composition,	Belfast.
Reade, Hoctor M.,	First in English Composition,	Galway.
Blackhall, John J.,	First in Geometry,	Cork.
Clements, Robert,	First in Geometry,	Galway.
M'Farlane, John Henry,	First in Geometry,	Belfast.
Croke, John O'Byrne,	Second in English Composition,	Galway.
O'Donnell, William,	Second in English Composition,	Cork.
Shaw, John Greig,	Second in English Composition,	Belfast.
Lynam, James,	Second in Geometry,	Galway.
M'Cartie, Charles J.,	Second in Geometry,	Cork.
Perry, John,	Second in Geometry,	Belfast.

SECOND OR THIRD INSTALMENTS OF EXHIBITIONS.

The following Exhibitioners have fulfilled the conditions which entitle them to the Second or Third instalments of their Exhibitions:—

Names.	Condition.	Exhibition Awarded.
MacSwinney, R. F.,	M.A.,	October, 1865.
Anglin, A. H.,	M.A.,	October, 1866.
Macaulay, C. P.,	M.A.,	October, 1866.
Monteath, J.,	M.A.,	October, 1866.
Wylie, J. O.,	M.A.,	October, 1866.
MacDonald, C. J.,	B.A., with Honors,	October, 1867.
O'Brien, J. H.,	B.A., with Honors,	October, 1867.
Fitzpatrick, J.,	B.A., with Honors,	October, 1867.
Hoey, W.,	B.A., with Honors,	October, 1867.
Young, J.,	B.A., with Honors,	October, 1867.
Millar, J. B.,	B.E., with Honors,	October, 1867.

EXHIBITIONS AWARDED AT FIRST UNIVERSITY EXAMINATION IN ARTS.

October, 1868.

Stack, Edward, First from Queen's College, Belfast; £20 a-year for three years; and £10 a-year for three years, as the best answerer in Ancient Classics.

Drummond, Michael, First from Queen's College, Galway; £20 a-year for three years.

Finucane, Michael, First from Queen's College, Cork; £20 a-year for three years;

Henry, William Edward, Second from Queen's College, Galway; £15 a-year for three years.

Scott, Ross, Second from Queen's College, Belfast; £15 a year for three years.

Horan, Thomas, Second from Queen's College, Cork; £15 a-year for three years; and £10 a-year for three years as the best answerer in Mathematical Science.

Wilkin, James, Third from Queen's College, Belfast; £15 for the first year; £15 for the second year; and £10 for the third year.

EXHIBITIONS AWARDED AT FIRST UNIVERSITY EXAMINATION IN ENGINEERING.

October, 1868.

Parkes, Benjamin, Queen's College, Cork; First; £20 a-year for two years.
Bottomley, William, Queen's College, Belfast; Second; £15 a-year for two years.

First University Examination in Arts, October, 1868.

With Honors.

FIRST CLASS IN ORDER OF MERIT.

Names.	College.	Names.	College.
Stack, Edward,	Belfast.	Wilson, R. B. G.,	Galway.
Drummond, Michael,	Galway.	Wilkin, James,	Belfast.
Finucane, Michael,	Cork.	Wylie, Matthew,	Belfast.
Henry, William Edward,	Galway.	Horan, Thomas,	Cork.
Scott, Ross,	Belfast.		

SECOND CLASS IN ORDER OF MERIT.

Names.	College
Halliday, John Thomas,	Belfast.
Matthews, William Gardiner,	Galway.
Stronge, Samuel Edgar,	Belfast.
Anderson, Richard J.,	Belfast.

THIRD CLASS IN ORDER OF MERIT.

M'Kinney, Samuel S. J.	Galway.
Magill, James,	Cork.
Humphrey, George,	Cork.
Muir, William,	Belfast.
Dysart, Thomas,	Belfast.

UNCLASSED.

Campbell, George Stuart,	Belfast.	M'Mordie, Robert J.,	Belfast.
Chestnut, John,	Cork.	Megarry, James,	Belfast.
Glover, Ralph Francis,	Galway.	Mulligan, James,	Belfast.
Heazle, Henry Charles,	Cork.	Parks, John M.,	Cork.
Ievers, Robert William,	Galway.	Rogers, Thomas,	Belfast.
Kennedy, James,	Belfast.	Simpson, Robert T.,	Belfast.
Legate, Charles J.,	Belfast.	Smylie, William,	Belfast.
Lyle, Thomas,	Belfast.		

First University Examination in Engineering, October, 1868.

FIRST CLASS IN ORDER OF MERIT.

Parkes, Benjamin,	Cork.
Bottomley, William,	Belfast.
Glover, Ralph Stephen,	Galway.
Moran, James,	Cork.

SECOND CLASS.

Gibson, Edmond,	Belfast.

THIRD CLASS.

Dann, Alfred G.,	Cork.
Laffan, George Bastable,	Cork.
Townsend, Thomas A.,	Galway.

UNCLASSED.

Hill, Luke Mulock,	Belfast.
Hunter, Scott,	Belfast.
Rice, Patrick,	Cork.
Sanderson, William Brown,	Galway.

Students Matriculated since October, 1868.

Names.	College.	Names.	College.
Adam, William,	Galway.	Bull, Ralph A.,	Cork.
Adams, David Ogilvie,	Belfast.	Burgess, Robert,	Belfast.
Adams, John James,	Belfast.	Burgess, William A.,	Cork.
Adams, Robert G.,	Cork.	Byrne, Daniel,	Belfast.
Allen, William H.,	Cork.	Chabrell Marceline,	Cork.
Anderson, Adam,	Galway.	Clapp, Augustine A.,	Cork.
Armstrong, Charles,	Galway.	Clarke, Edward,	Galway.
Armstrong, Thos. Middleton,	Galway.	Clarke, John,	Belfast.
Ball, Thomas,	Belfast.	Clarke, John B.,	Cork.
Barnes, Leopold J. Joseph,	Galway.	Clements, Robert,	Galway.
Beattie, Samuel,	Belfast.	Clugston, Robert Smyth,	Belfast.
Black, Silas,	Galway.	Cogan, John H.,	Cork.
Blackhall, John J.,	Cork.	Collis, Edward P.,	Cork.
Blyth, William D.,	Cork.	Collis, John George,	Cork.
Boden, John,	Belfast.	Colthurst, Ludlow F.,	Cork.
Bolton, Charles P.,	Cork.	Comyn, George Patrick,	Galway.
Brown, Benjamin W.,	Cork.	Concannon, Wm. Fielding,	Galway.
Browne, Andrew Langton,	Belfast.	Conolly, Paul Shelton,	Galway.
Buckley, Douglas C.,	Cork.	Cope, David,	Belfast.
Bull, Joshua E.,	Cork.	Coppinger, Richard W.,	Cork.

Appendix.

II.

Degrees, Certificates, and Honors, 1868.

Names.	College.
Corr, William Richard,	Belfast.
Creagh, James,	Cork.
Cregan, Michael,	Cork.
Croke, John O'Byrne,	Galway.
Cunningham, Josias,	Belfast.
Curtin, John L.,	Cork.
Dale, John T.,	Cork.
Daly, Timothy,	Cork.
Davis, Hugh A.,	Cork.
Donaldson, Alexander H.,	Cork.
Donaldson, Robert D.,	Cork.
Dickson, John,	Galway.
Drake, James Edward,	Galway.
Duke, Charles Henry,	Galway.
Edge, John Dallas,	Galway.
Erwin, Samuel James,	Belfast.
Fisher, Walter Mulrea,	Belfast.
Fitzmaurice, Richard,	Cork.
Fuller, John,	Cork.
Gale, Berkley,	Cork.
Gallway, Thomas J.,	Cork.
Gardner, Robert,	Galway.
Garvey, Patrick,	Galway.
Gilmour, Alfred John,	Belfast.
Hall, William J.,	Cork.
Hamill, Robert George,	Belfast.
Hamilton, Henry,	Belfast.
Hanan, Thomas J.,	Cork.
Henry, Henry Hazlett,	Belfast.
Hill, John,	Galway.
Hodges, John Fredk. W.,	Belfast.
Hogg, Frederick J.,	Cork.
Holland, John,	Galway.
Holmes, Robert Frederick,	Galway.
Houston, James D. Craig,	Belfast.
Houston, John Knox,	Belfast.
Hughes, Edwin,	Belfast.
Hughes, John,	Belfast.
Johnson, Henry M.,	Cork.
Johnson, Samuel,	Galway.
Kain, Thomas,	Galway.
Kearney, Thomas,	Cork.
Kennedy, George,	Belfast.
Kennedy, James Martin,	Belfast.
Kennedy, Wm. Wilson,	Galway.
Kenney, Moses Paul,	Belfast.
Kent, Henry,	Belfast.
Keys, Robert,	Galway.
Killen, James Millar,	Belfast.
Leader, Richard R.,	Cork.
Leahy, David,	Cork.
Leech, John R.,	Cork.
Lindsay, Thomas J.,	Cork.
Lombard, Daniel E.,	Cork.
Lupton, Thomas S. E.,	Galway.
Lynam, James,	Galway.
MacAuliffe, Percy Brown,	Galway.
M'Carthy, James,	Galway.
M'Cartie, Charles,	Cork.
M'Cracken, Joseph,	Belfast.
M'Culloch, James,	Belfast.
M'Cune, Samuel,	Belfast.
M'Donnell, Mark John,	Galway.
M'Donnell, Patrick,	Galway.
M'Farland, John Henry,	Belfast.
M'Glinchy, Charles E.,	Belfast.
M'Kee, Daniel,	Belfast.
M'Kee, William Alexander,	Belfast.
M'Master, James,	Belfast.
M'Nabb, Joseph,	Cork.

Names.	College.
Madden, Henry M.,	Cork.
Madders, Henry J.,	Cork.
Mark, David,	Belfast.
Marsh, Joshua J.,	Cork.
Martin, Samuel Edgar,	Belfast.
Meeke, James,	Belfast.
Millward, George Robert,	Galway.
Mitchell, James,	Galway.
Moffatt, Richd. Hen. Geo.,	Galway.
Mogey, Alexander,	Belfast.
Monaghan, Thos. Joseph,	Galway.
Montgomery, Samuel,	Belfast.
Moorehead, James,	Galway.
Morrison, Robert Charles,	Galway.
Morrow, John,	Belfast.
Mullally, Michael,	Galway.
Mullen, Douglas,	Galway.
Mulrennan, John,	Cork.
Munro, Joseph Edwin C.,	Belfast.
Murphy, Charles O'Brien,	Belfast.
Murphy, Michl. Dominic,	Galway.
Murphy, Thos. A. O'Brien,	Belfast.
Murphy, William T.,	Cork.
Neill, Matthew,	Belfast.
Nuttall, Charles John,	Belfast.
O'Connell, Patrick,	Cork.
O'Donnell, Thomas A.,	Cork.
O'Donnell, William,	Cork.
O'Sullivan, Joseph,	Cork.
Ormsby, L. Hempstall,	Galway.
Orr, John,	Belfast.
Patrick, Robert,	Belfast.
Pearson, Christopher,	Cork.
Perry, John,	Belfast.
Phillips, John Gilles,	Belfast.
Powell, Caleb,	Cork.
Pyper, William,	Belfast.
Reade, Hector M'Neile,	Galway.
Riddell, Robert,	Belfast.
Robertson, Joseph,	Belfast.
Robinson, James,	Belfast.
Roe, Robert George,	Galway.
Roe, St. George Joseph,	Galway.
Roe, William Thomas,	Galway.
Ronaldson, James,	Belfast.
Ross, David J.,	Cork.
Ross, William,	Belfast.
Seyers, Raymond Franklin,	Galway.
Shaw, John Greig,	Belfast.
Shiel, Joseph Robert,	Galway.
Smith, Nicholas S.,	Cork.
Smyth, John W.,	Belfast.
Sparrow, Thomas F.,	Cork.
Spence, James Beveridge,	Galway.
Spence, Thomas,	Belfast.
Sproule, Godfrey Knight,	Galway.
Steen, David,	Belfast.
Steen, William,	Belfast.
Stevenson, William John,	Belfast.
Stewart, William J. M.,	Cork.
Stuart, Chas. MacDonnell,	Belfast.
Taylor, Adrian,	Cork.
Thomson, John,	Belfast.
Vance, William Kingston,	Belfast.
Walshe, Thomas,	Galway.
Warren, Thomas Monteith,	Galway.
Warren, Thomas Stephen,	Belfast.
Warren, William Edward,	Galway.
Warwick, James,	Belfast.
Watson, Robert,	Belfast.

Names.	College.
Watters, Alexander Duff,	Belfast.
Welsh, Francis,	Belfast.
Westropp, W. H. Stackpoole,	Galway.
Whitford, William,	Belfast.
Whitton, Thomas B.,	Cork.
Williams, James Douglas,	Belfast.
Williams, William,	Galway.
Wilson, John Forsythe,	Belfast.
Wilson, Robert,	Belfast.
Wilson, Thomas K.,	Belfast.
Wylie, Alexander,	Belfast.
Young, Robert M.,	Belfast.

Appendix. II. Degrees, Certificates, and Honors, 1868.

Examination of Candidates for the Title of Associate in Arts.

First Class.

James Robinson, First Rank in Section A. (English); Second Rank in Section C. (Mathematics).

Second Class.

William Whitford, Second Rank in Section C. (Mathematics).

Examination of Boys under Fifteen Years of Age.

Second Class.

William Robert Henderson (Royal Academical Institution, Belfast; John Carlisle, Master).

Third Class.

Edward Parnell Culverwell (Mr. Dennis's school, Howth, co. Dublin).

Unclassed Candidate.

Charles Ulic Carruthers (Mr. Power's school, Harrington-street, Dublin).

Appendix III.

III. Estimate of the Sum required for the Queen's University.

Estimate of the Sum required to defray the Expenses of the Queen's University in Ireland, for the year ended 31st March, 1869.

	£	s.	d.
Salaries,	935	0	0
Examiners,	1,565	0	0
Medals and Prizes,	475	0	0
Incidental Expenses,	180	0	0
	£3,155	0	0

Appendix IV.

IV. Cash Account of the Queen's University.

Cash Account of the Queen's University, for the year ended 31st March, 1869.

Dr.	£	s.	d.
Forward from last Account,	1,457	18	11
Parliamentary Grant,	3,155	0	0
Fees,	593	10	0
Withheld for Income Tax,	15	12	3
Withheld for Stamps,	0	3	4
Balance,	280	11	3
	£5,502	15	9

Cr.		£	s.	d.
Salaries,	£931 5 0			
Examiners,	1,804 16 1			
Medals and Prizes,	518 15 0			
Incidental expenses,	181 9 7			
		3,436	5	8
Income Tax paid to Inland Revenue,	£15 12 3			
Fees paid over to Exchequer,	593 10 0			
Stamp Duty paid to Exchequer,	0 3 4			
Surrendered to Exchequer,	1,457 4 6			
		2,066	10	1
		£5,502	15	9

Appendix.

V. Meetings of the Senate.

Appendix V.

Meetings of the Senate.

Meeting of Senate, April 23, 1868.

Present:

The Right Hon. Maziere Brady, *Vice-Chancellor.*
The President Queen's College, Cork.
The President Queen's College, Galway.
David Ross, LL.B.
William MacCormac, M.A., M.D.
G. Johnstone Stoney, M.A., F.R.S., *Sec.*

Meeting of Senate, and Public Meeting of the University, June 27, 1868.

Present:

The Right Hon. Maziere Brady, *Vice-Chancellor.*
The President Queen's College, Cork.
Robert Adams, M.D.
William K. Sullivan, PH.D.
David Ross, LL.B.
G. Johnstone Stoney, M.A., F.R.S., *Sec.*

Meeting of Senate, and Public Meeting of the University, October 11, 1868.

Present:

The Right Hon. Maziere Brady, *Vice-Chancellor.*
The President Queen's College, Belfast.
The President Queen's College, Galway.
Major-General Sir Thomas A. Larcom, bart., K.C.B.
James Gibson, Q.C.
Robert Adams, M.D.
William K. Sullivan, PH.D.
David Ross, LL.B.
William K. MacCormac, M.D.
Thomas William Moffett, LL.D.
G. Johnstone Stoney, M.A., F.R.S., *Sec.*

Meeting of Senate, December 23, 1868.

Present:

The Right Hon. Maziere Brady, *Vice-Chancellor.*
The President Queen's College, Cork.
The President Queen's College, Galway.
Sir Dominic J. Corrigan, bart., M.D.
Robert Adams, M.D.
William K. Sullivan, PH.D.
David Ross, LL.B.
William MacCormac, M.A., M.D.
Thomas William Moffett, LL.D.
G. Johnstone Stoney, M.A., F.R.S., *Sec.*

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